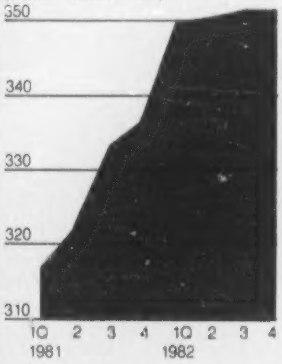
predicts a fair-sized Free World consumption increase (from 4.0 million metric tons up to 4.5 million). But that should still leave a surplus, as more new mines come on stream.

Freight rates

Some fairly good news here. Stable fourth quarter trucker costs—due primarily to lower distillate fuel tags—should keep official tariffs relatively stable into early 1983. But over the next few years some modest increases are inevitable—with advances in 1983 and 1984 averaging out at near a 6% annual rate. The rail rate picture doesn't look all that bad either. Best bet here: Only a small 3-4% overall increase during the next 12 months—but with some acceleration, perhaps into the 6-7% range over the subsequent year (1984).

Rail rates
(Index: 1969 = 100)



Alkalis

Market prices continue to slide—with the going transction quote for volume purchases of caustic soda down as low as $185-195/ton—off some $25/ton from June 1982 levels. Behind the decline: poor demand plus the availability of low-priced imports. Meantime, soda ash is also dropping—with another $2/ton decline bringing tags down to only $84/ton—some $8/ton under yearago readings. The drop here is also attributed to poor demand—with added pressures coming from rising stocks and overcapacity due to new production put on stream by two of the major producers (Kerr-McGee and Tenneco).

Pipe fittings

The influx of carbon flange imports is approaching the flood stage—with overseas products now accounting for over half of all U.S. shipments—up from the only 36% share noted back in 1978. The big incentive, of course, is price. Example: Incoming flanges under 14 inches in diameter are being priced at only 55¢/lb—far under the recently reduced 89¢/lb domestic quote. Industry spokesmen add that there are now instances where imported flanges are offered to domestic buyers at prices equal to the U.S. cost of production.

Lead

Prices recently slipped to their lowest level in more than 6½ years. More significant, they've dropped to less than half the 44¢/lb peak hit back in August 1980—and most producers are losing as much as 10¢/lb on the metal they do manage to sell. Nor is any meaningful nearterm recovery in sight. True, if the

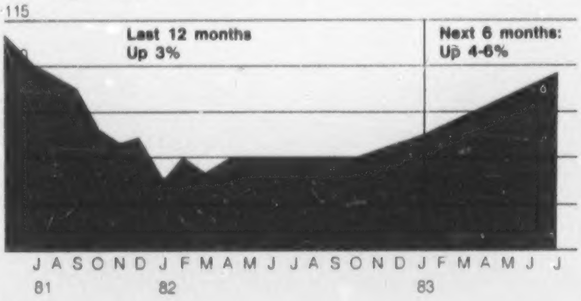
Plastic resins

CURRENT SITUATION: Prices are finally beginning to show some signs of bottoming out. A few increases, for example, were posted in late 1982—and more are scheduled for implementation this month. These hikes suggest that negotiations will be starting off from a higher base—**and this could well mean some creep-up in actual market quotes**—especially if the modest order uptick noted this past fall carries over into the new year.

DEMAND: Fair-sized gains seem like a pretty good bet in 1983 for vitually all the major resins—except for low-density polyethylene (LDPE) which is gradually being replaced by higher quality, more economical linear low-density resins (LLDPE). Right now, the industry is talking in terms of these percentage advances for the year as a whole: high-density polyethylene (HDPE)—7-9%; polypropylene (PP)—5-7%; polystyrene (PS)—8-10%; polyvinyl chloride (PVC)—6-8%; and ABS resins—2-4%. Some of these may seem substantial. **But they would still leave PS, PVC, and ABS under 1979 peaks.**

SUPPLY: Overcapacity will again be the rule in 1983—with the industry expected to operate at only about 70% of its rated potential. Indeed, only HDPE and PP will manage to achieve respectable 75%-or-higher levels. However, the industry is taking steps to bring things back into better balance. Two years ago, resin makers were talking in terms of 45 billion lb by late 1985. Today, that figure has been cut by 13%. **Even so, there should be ample resin to go around by 1985**—with the possible exception of PP where very little new capacity is targeted.

PRICE OUTLOOK: The trend will be up because of (1) expected demand increases, (2) current unprofitable operations, and (3) expected rises in key petrochemical feedstock costs. But the advances will be small and gradual. By midsummer, average market levels should be up by only about 5%—with all of the major resins sharing in the gain. As for the year as a whole—the average advance won't be much more than that—probably something in the order of 8%.

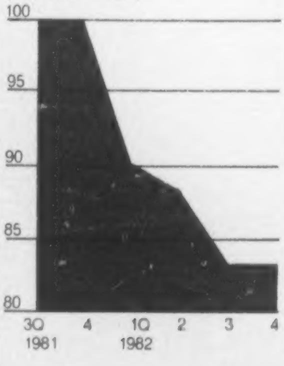


next 6-8 weeks are a lot colder than normal, it could mean better demand from battery makers. But this isn't what the weather pundits are predicting. Equally disturbing—at least as far as producers are concerned—is continuing high Free World production. Mine output last year was up 100,000 metric tons—and probably an equal amount in 1983—making for a continuing glut and still further advances in their already-high inventories.

Corrugated

Shipments have picked up a bit of late—but not enough to prevent a 5% decline in overall 1982 shipments. Also, board inventories at the producer and box plant levels are down to near a 6½-week supply—nearly three weeks under beginning-of-last-year levels. Implication: The pickup in box demand when it comes will quickly be felt on the paper mill level. Meantime, discounting remains as strong as ever on the linerboard front where prices are being shaved by as much as $50/ton.

Linerboard
(3Q 1981 = 100)



Steel

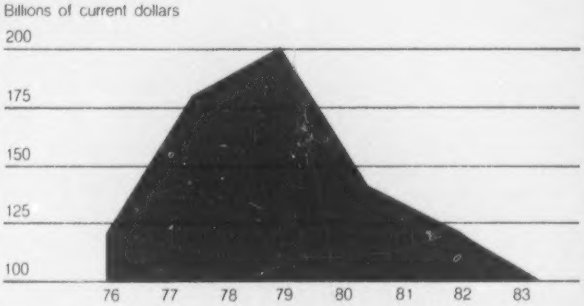
Buyers are still firmly in the saddle. Recent reports, for example, suggest there are plenty of bargains around in the key flat-rolled product area—with prime metal often moving for as much as $50-100/ton under published lists. Some secondary or class 2 material is available at even bigger bargains. Meantime, mills seem to be pushing back the expected recovery until spring, when some modest hedge buying against a possible strike is possible. Also, their estimated shipments for 1983 as a whole are put at only 74-76 million tons—still far under the 87 million tons shipped in 1981.

Copper

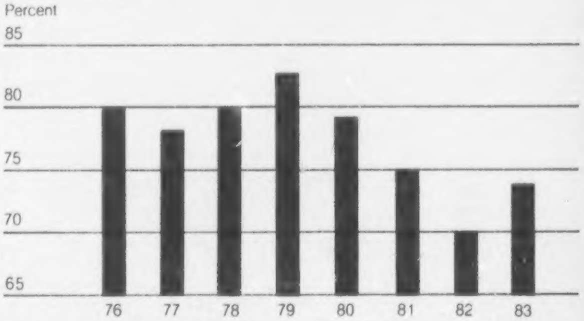
There's still no sign of any sustained rally—with producer tags still backing and filling in the 70¢/lb range and exchange quotes a lot lower than that. Then, too, foreign sheet is said to be coming in anywhere from 10-25% under comparable domestic levels. The major problem is, of course, lack of any real pickup in key user industries. But the failure of Third World countries to cut production is a strong contributing factor. Nor is any significant improvement likely. Indeed, red metal consumers don't even seem concerned about the possibility of a mid-1983 U.S. mine strike when current contracts expire. Implication: No major impact on prices is likely in early 1983. True, quotes may slowly rise as demand gradually picks up. But given today's market fundamentals, it's hard to make a case for anything higher than, say 75-80¢/lb copper by next spring. ***PW***

Chemicals

Shipments



Operating rate



Source: Chemical Manufacturers Association

The huge chemical industry is beginning to talk in terms of a more bullish 1983—despite extremely low operating rates and list prices that are little more than the starting point for serious negotiation.

The Chemical Manufacturers Association, for example, sees about an 11% increase in overall dollar sales—bringing total billings for the new year to over $194 billion and earnings up by an even more impressive 15%.

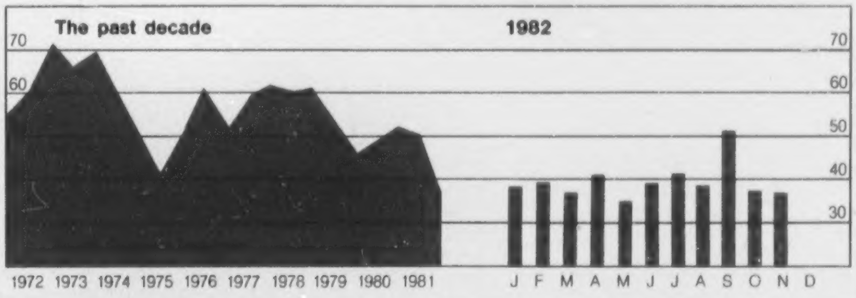
Several factors are cited for this optimistic forecast in addition to the expected modest business pickup. These include low pipeline inventories, improved productivity and lower breakeven points.

There's also some good news for buyers. While the CMA doesn't explicitly talk about prices, its overall operating rate estimates for the new year (73.8%) suggests that there will be plenty of bargaining leverage.

Also encouraging—at least as far as prices are concerned—are the expectations of relatively restrained upward cost pressures which are projected for 1983 as follows: raw materials—up 6.5%, wage rates—also up 6.5%, and fuel and power—up 10%.

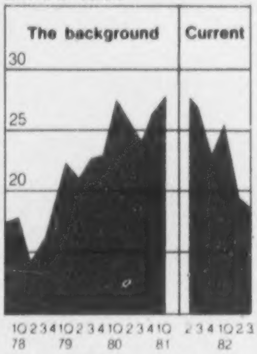
BUSINESS DATATRAK

NAPM business barometer Based on five indicators (employment, inventories, new orders, production, vendor performance)

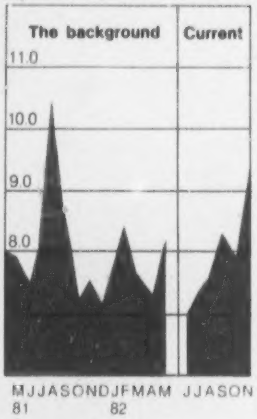


Leading indicators

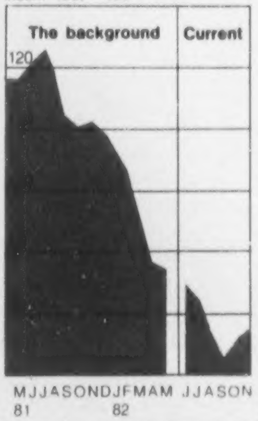
Capital appropriations
Billions of dollars



Car sales
Millions of units seasonally adjusted annual rate



Help wanted
Index: 1967 = 100



KEY ECONOMIC TRENDS

Major indicators show little promise

The traditional economic indicators still leave a lot to be desired.

True, they are no longer in free fall (except for the important capital goods sector). But for the most part, the figures look far too weak to promise any significant pickup over the next few months.

This can perhaps best be summarized by the all-inclusive NAPM business barometer (see chart). This bellwether indicator of industrial activity a few months down the pike is still going nowhere, continuing to back and fill in the "under 40" range.

The point to keep in mind here: That's still a fair distance below the neutral 50 level that historically has been the turning point for a sustained business pickup. About the best that can be said is that things are no longer getting any worse.

Look at Uncle Sam's index of leading indicators, and the conclusion is much the same. While stability is now noted here, too, the latest levels are far under those prevailing when the recession began (even though this indicator has been inflated by the sharp recovery in such financial series as stock market averages).

One of the big problems is capital investment. Note from the accompanying chart, for example, that appropriations are now running more than 30% under the highs of last year. Since this series normally leads actual outlays, the forecasts for a poor 1983 in this sector would seem to be pretty much on the button.

On a somewhat more cheery note, auto sales seem to have picked up a bit (see chart). But much of this may be due to cut-rate sales by producers intent on getting rid of their old 1982 models.

In any event, the uptrend noted here would have to persist for a few more months to warrant reading any significant improvement into this key barometer of consumer spending.

A somehwat more positive inference, however, can be read into recent gains in housing permits and starts. Here, recently lowered interest rates do seem to be having an impact—one that is likely to continue through early 1983, provided forecasts for continued declines in interest rates (albeit very modest ones) prove to be accurate.

One of the imponderables in gauging all consumer spending trends these days, meantime, is the current deflation. The question is: Will consumers continue to hold off, hoping for yet lower tags in the months ahead? One thing for sure, it's injecting an added note of uncertainty into all forecasts.

And there's yet another unknown: the impact of

10%-and-higher unemployment rates. With so many people out of work, families may continue to resist making purchases of postponable big-ticket items.

In any case, this high unemployment rate shows few signs of going down. Note, for example, that help-wanted figures (see chart), a harbinger of future changes in the jobless rate, are still exceedingly low, running some 25% or more under levels of a yearago.

Import prices continue downward

Import bargains continue to proliferate. If there's any doubt on this score, take a look at the adjacent table detailing price declines in key import product lines.

Where import prices are falling

PRODUCT CATEGORY	% DECLINE LAST 3 MONTHS	% DECLINE LAST 12 MONTHS
Textiles	- 1.9	- 5.3
Iron and steel	- 2.8	- 7.4
Copper	-10.3	-20.1
Tin	- 9.0	-19.9
Wire products	- 2.3	- 2.1
Metal fasteners	- 3.4	- 5.8
Locks, safes, etc.	- 1.9	- 2.1
Sewing machines	- 4.2	- 1.0
Weaving & knitting equip.	- 3.7	- 3.2
Heating & cooling equip.	- 3.6	- 1.3
Heat treating equip.	- 4.3	- 5.1
Air pumps	- 3.0	- 3.0
Selected hand tools	- 2.9	- 3.0
Clutches, transmissions	- 5.9	- 1.6
Office machines	- 2.5	- 2.9
Telecomm. appartus	- 2.3	- 5.4
Electric machines	- 3.6	- 2.8
Household appliances	- 1.3	- 4.3
Auto parts	- 4.7	- 2.0
Construction fixtures	- 3.1	- 1.2
Cotton undergarments	- 5.2	- 1.2
Footwear	- 1.1	- 3.4
Optical instruments	- 2.0	- 1.5
Medical instruments	- 4.3	- 1.7
Photo equip.	- 4.6	- 9.4
Optical goods	- 5.3	- 4.8
Watches, clocks	- 4.6	- 7.3
Softwood lumber	- 1.1	- 5.7

Source: Bureau of Labor Statistics

Even this listing (supplied by the Bureau of Labor Statistics) doesn't tell the whole story. It contains only those items which were below both three-month-ago and year-earlier levels. It excludes quotations that have been falling in recent months but are still above year-earlier levels.

If you were to include this last category, then such other major sectors as machine tools would also have to be put on the bargain list. Metalworking machinery and equipment, for example, dropped a strong 4.4% over the latest recorded three-month period, and machine tool parts were off by an almost-as-large 3.6%.

The reasons for all these declines aren't all that hard to pinpoint. For one, there's the strong U.S. dollar. Other things being equal, a buoyant U.S. currency means it takes fewer dollars to purchase materials, parts, machinery, and other items that are generally quoted in terms of local currencies.

This is not an insignificant factor, for the dollar has appreciated on a trade-weighted basis by some 20% relative to average 1981 levels, with even sharper gains noted in the case of the dollar relative to the Belgian and French francs and the Japanese yen.

Another factor behind the bargains is the worldwide recession. Clearly, the poor business being experienced by foreign producers in their own markets has let to expanded efforts on their part to sell here in the United States—often at distress prices and sometimes with the aid of subsidies from their own governments.

Also worth noting: Most of the competition seems to be coming from the industrialized West rather than from so-called developing countries. Lump the European Economic Community, Japan, and Canada together, and the incoming shipments from these sources now account for more than half of all our imports.

Another measure of the rising foreign role: In the year just ended, imports managed to maintain the pace of the previous 12 months, despite a near-8% drop in our domestic industrial production.

The inescapable conclusion: Overseas goods now account for a bigger portion of our overall purchase mix. This is certainly true in items like steel, where foreign metal, month after month, captures more than 20% of the domestic market.

There's other economic fallout, too, in terms of a ballooning trade deficit. This past year, imports exceeded exports by about $40 billion. And next year, the red-ink figure could grow to near $45 billion.

CURRENT PRICES

Price declines outnumber increases

The old year has ended on an encouraging note—at least as far as industrial price inflation is concerned.

For the first time in more than a decade, the 50 sectors monitored regularly by ***Purchasing World*** show more negative than positive signs relative to month-earlier levels (see table). Equally impressive, only for items show monthly increases in excess of 0.5%.

Note, too, that there are now also some significant declines vis a vis a year ago. This is particularly true in the petroleum sector where gasoline and lube oils are off 7.6% and 4.7%, respectively.

Organic chemicals remain equally as weak, with the latest average running better than 8% under a year earlier. Plastics are off by a somewhat smaller 4%. But if you take into account all the unofficial discounting here, the decline is equally as large.

Coming back to declines over the last reported month: in additon to the aforementioned areas, slippage is noted in agricultural machinery, most paper products, textile fabrics, and both steel and nonferrous scrap.

The building materials sector is more mixed. This reflects a slow turnaround in demand.

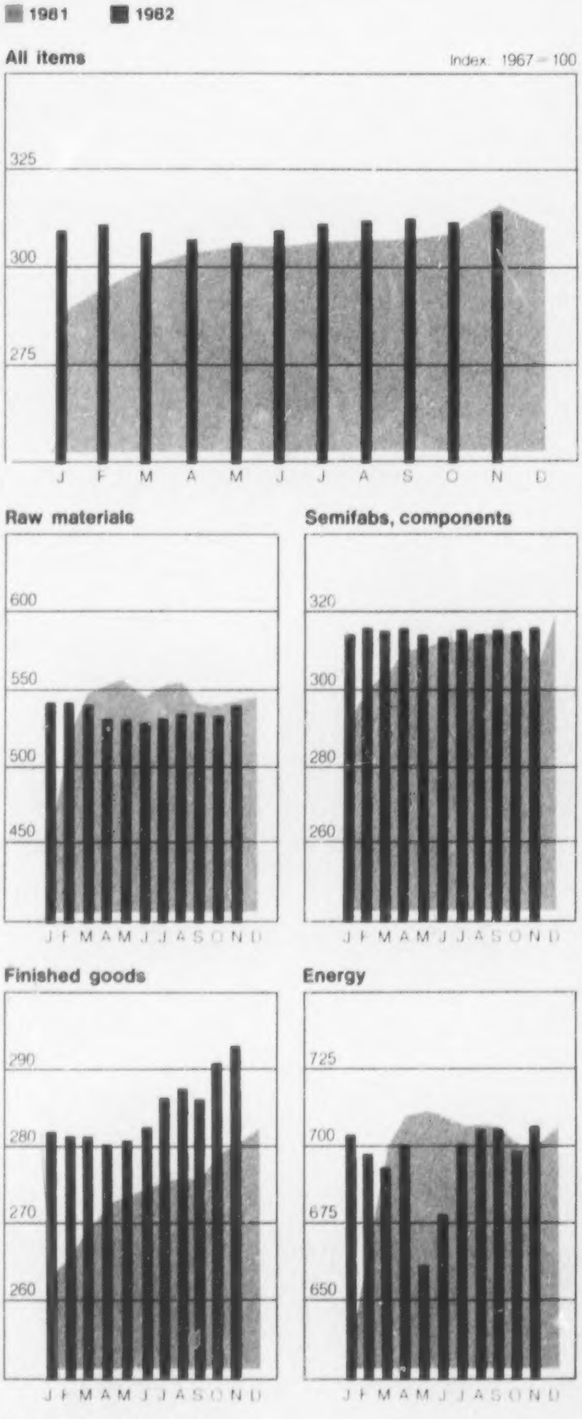
About the only really disturbing sector, as far as big price increases are concerned, is natural gas. Here, hefty advances continue, reflecting the gradual deregulation of this clean-burning fuel.

But this is hardly enough to turn the tide. Upshot: Overall industrial prices now show less than a 2% rise over the past 12 months, with all signs pointing to a continuation of the encouraging trend into the first quarter.

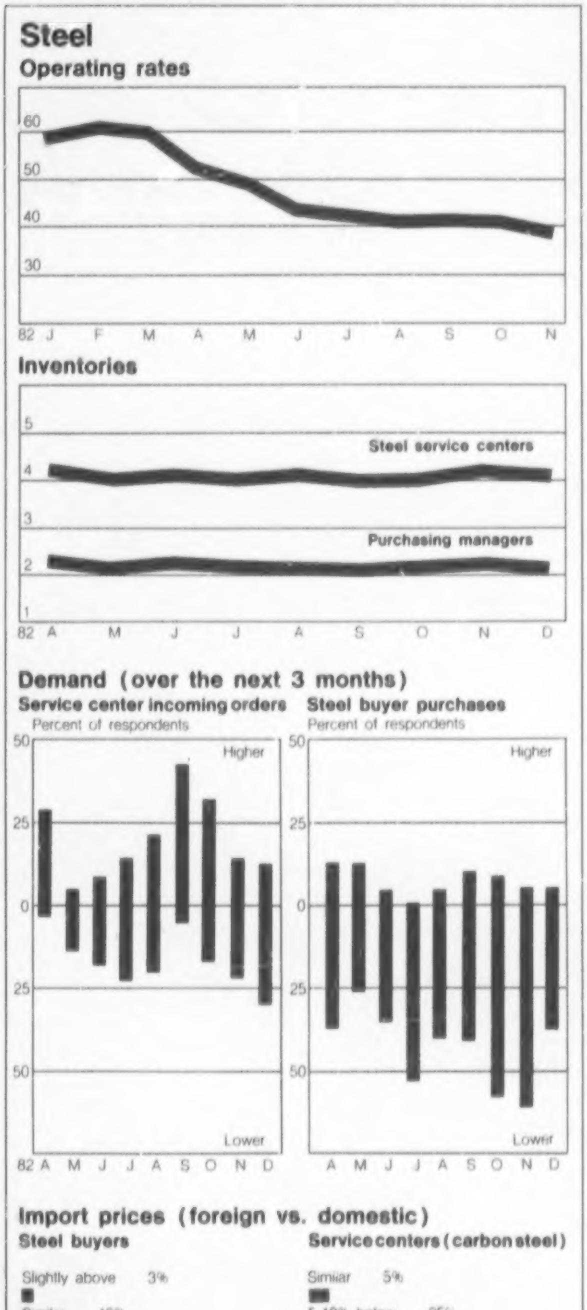
This month's breakdown

	Latest level (Nov.)	% change from: Month ago	Year ago
Bearings	335.3	0.0	4.3
Bolts, nuts, etc.	270.3	-1.3	1.7
Chemicals, inorganic	308.2	-0.1	2.8
Chemicals, organic	363.7	-0.7	-8.1
Concrete products	298.1	-0.2	1.6
Cutting tools, small	276.6	0.0	3.5
Electrical instruments	257.6	0.0	6.8
Electric lamps (bulbs)	296.8	0.0	6.6
Fans and blowers	336.1	0.0	2.2
Fittings, industrial	307.3	0.0	1.1
Foundry and forge products	346.1	-0.2	2.7
Fuel oil (residual)	1152.8	2.5	-1.8
Furniture, commercial	279.1	0.1	6.0
Gasoline	665.4	-1.4	-7.6
Glass, flat	225.3	1.9	3.1
Glass containers	358.5	0.0	6.9
Gypsum products	254.9	-0.1	1.4
Hand tools	342.3	0.0	4.2
Hand tools, power driven	221.6	0.0	3.2
Industrial furnaces	356.1	0.0	5.0
Integrating and measuring instruments	214.9	0.6	5.5
Internal combustion engines	335.0	0.1	6.3
Lubricating oil	846.7	-2.4	-4.7
Lumber millwork	280.3	0.6	3.1
Material handling equipment	286.3	0.2	0.7
Metal containers	327.0	-0.5	2.8
Metal mill shapes (nonferrous)	301.3	-1.1	-1.7
Metal tanks	311.1	-0.5	0.2
Motors and generators	310.6	-1.5	1.7
Motor trucks	292.6	0.2	4.6
Office and store equipment	153.0	0.2	3.4
Paperboard	247.6	-0.2	-5.4
Paper boxes and shipping containers	248.5	-0.2	-0.1
Paper office supplies	226.8	-0.4	3.7
Paint	265.1	0.0	4.2
Plastic resins	281.4	-0.1	-4.0
Precision measuring tools	24[illegible].6	0.0	5.8
Pumps and compressors	348.0	0.1	3.6
Refractories	337.7	-1.1	9.3
Rubber belts and belting	324.7	-0.2	5.9
Scales and balances	227.2	0.1	2.5
Steel products	348.0	-0.1	0.2
Switchgear	260.6	-0.1	2.2
Textiles, synthetic fibers	162.1	0.1	0.3
Textiles, gray fabrics	143.0	-0.4	-3.0
Tires and tubes	254.8	-0.4	-0.4
Transformers and power regulators	220.6	0.0	-0.7
Valves, industrial	329.6	0.1	1.9
Welding equipment	273.1	0.0	1.9
Wire and cable	198.2	-0.1	-4.2

Industrial prices at a glance



Source: Bureau of Labor Statistics



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

STEEL SCENE

No growth for months

The long-awaited steel recovery still looks to be at least several months away.

That's the only way you can interpret new industry surveys by the NAPM Steel Buying Committee and the Steel Service Center Institute (SSCI). Results culled from both studies suggest that steel activity over the next three months will be relatively low—perhaps even under the already-low levels of late 1982 (see chart).

In any event, it's hard to shrug off the fact that some 36% of the buyers queried now expect to reduce their receipts of the metal over the next few months—some six times as many as the miniscule 6% who say they're planning on increases.

Steel service centers tell much the same story here—with the 28% who anticipate decreases in incoming orders in the first quarter far outweighing the 13% who still hope for increases. The latter figure, incidentally, is the lowest in some six months—hardly the harbinger of any imminent improvement in this recession-ridden industry.

To be sure, there are a few pockets of strength. Distributors on the East Coast are not quite as bearish about the immediate nearterm—with SSCI president Andrew G. Sharkey attributing this to increased activity in construction and defense-related industries.

One other bright spot, according to the SSCI spokesman, is demand from the trucking industry—or compact trucks to be more exact.

But this has obviously not been enough to prevent an extremely disappointing year for steel service centers. The industry association, for example, estimates that total shipments in the year just ended came to only 14-15 million tons—down some 20% from 1981 levels.

Eventually, of course, this big decline will be reversed—if not over the upcoming year then certainly by 1984. Sharkey adds, however, that when the bounceback does come, the industry will be looking a lot different than it did a few years back. Thus he feels distributors will be increasingly asked to provide more metallurgical capabilities and technological expertise, tighter delivery schedules, electronic communication for paperless transactions—and, finally, pricing that allows customers to be much more competitive internationally.

Sharkey anticipates other changes ahead, too. Among other things, he sees (1) service centers establishing pricing schedules for specific services provided and (2) a narrowing of customer sourcing so that buyers who previously had as many as 10 distributors will make do with only three or four.

This, in turn, means service centers will have to be more capital intensive—requiring more equipment to do four, five, or even six operations per product, rather than the one or two being done now.

But coming back closer to the present—both service centers and buyers are still faced with the problem of keeping inventories in line. True, they've both been cutting. But activity has been falling just as fast or even faster. Upshot: Months' supplies of steel on hand—both on the buyer and distributror levels—are as high or even higher than they were last spring and summer (see chart).

Not surprising then, both groups are still thinking in terms of new cutbacks. Specifically, some 44% of queried service centers and an even larger 61% of steel buyers now plan on further nearterm steel inventory reductions.

The two industry surveys also confirm continued strong import competition. Once again the figures tell the story. On the buyer front, for example, about 23% of the respondents now say that imports are being offered them at prices substantialy under comparable domestic levels. This is the largest percentage in years.

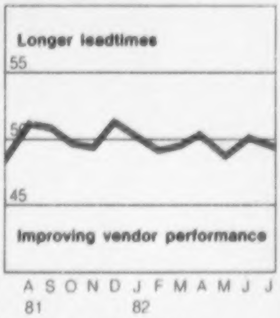
And again service centers confirm the trend. In the carbon steel sector, some 70% of responding distributors now say they are being offered metal at prices 10-20% under domestic levels—again the highest such figure in years.

And the same situation seems to be shaping up in stainless. Here some 55% report price gaps of 10-20%—compared to the only 19% and 25% who reported such large price advantages a year and six months ago, respectively.

Monthly procurement Status report

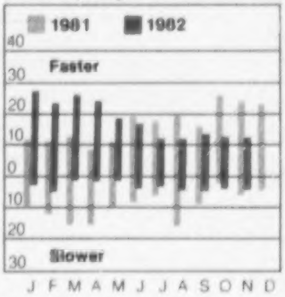
Leadtime index

A 'diffusion' index based on 158 key commodities. Above '50' indicates a tendency for leadtimes to stretch out. Below '50' suggests improving vendor performance

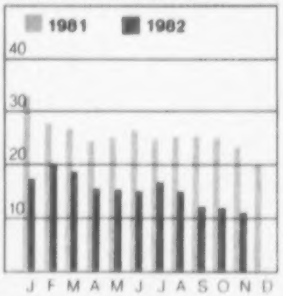


Delivery performance

Percent reporting deliveries

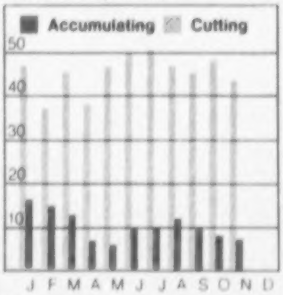


Forward commitments



Inventory strategy

Percent of respondents



Source: NAPM

But despite all these factors, both buyers and distributors feel they may be somewhat less dependent on overseas sources by summer or fall. Much of this is probably due to the recent imposition of quotas; for while quotas may not affect prices, they are bound to put a crimp in total import tonnages available.

PROCUREMENT STATUS

Supplies are plentiful

"There's no problem getting anything."

That's the comment from virtually every purchasing manager responding to ***PurchasingWorld's*** latest monthly procurment survey. More significant, almost all of the queried buyers see the "no sweat" situation lasting for at least another 3-6 months—and maybe even longer than that.

There's plenty of solid evidence to back up their appraisal, too—with (1) ***PurchasingWorld's*** exclusive leadtime index actually edging down a bit from what had heretofore been considered rock-bottom levels (see chart) and (2) responding buyers again failing to note one single item as being in short supply.

Equally reassuring is the report from the NAPM Business Survey Committe; those noting faster deliveries continue to outnumber those experiencing slower deliveries by a 3:1 margin. One has to go back to early 1981 to find the "slower" category on top.

To be sure, one or two PMs do express some concern that a sudden business upturn or severe winter weather could present some temporary problems. But these same people hasten to add that such difficulties—if they indeed do occur—are not expected to create any undue hardships.

Other signs of a continuing buyer's market: (1) a further decline (to 11%) in PMs who say they are committing 90 days or more in advance for production materials, and (2) continuing inventory reductions—a trend that has been going on since the summer of 1981.

Leadtimes and availability

Chicago: Softwood framing leads are out a bit (to 2-3 weeks). But sanded softwood plywood is in (to 2). PVC resins and powder are also in (to ½-1). Ditto, surfactants (to 4 days). Other typical waits (in weeks): batteries (12-14), cables (7-10), printed circuit boards (6-8), pipes & fittings (1), c-r steel (4-5).

Cleveland: A few minor stretchouts to these weekly levels: coil coating paint (3), maintenance paint (1-2), polyethylene and PVC resins (2), cold-finished aluminum (6). Unchanged are corrugated boxes (3), folding boxes (4), lumber and plywood (3), waterproof papers (5-6), plastic shrink film (3), and strapping (3).

Los Angeles: Latest cuts (to these new weekly levels): heavy duty steel (8-9), insulation material (4), specialty wire (4-5), fasteners (4-6) aluminum sheet (5-6), and stainless steel (5-6). But on the upside are paints (5), most filler materials (1½-2), copper tubing and fittings (4), and galvanized steel (5-6).

BUSINESS DATATRAK

Houston: Pretty much of a repeat of last month as ordering continues to lag. Some typical leads in weeks: steel from mills (4-8), alloy carbon steel (5-9), electronic parts (4-6), shop-fabricated carbon steel pipe (17-34), MRO supplies (2-4), tungsten carbide parts (14-18), and packaging materials (2-4).

Philadelphia: Some longer waits for computer paper—to 4-7 days. But steel is in substantially—to these levels (in weeks): stainless bar (3-6), carbon bar (3-4), and stainless round coil (8-10). Some widening of the spread in valves (to 5-8). Unchanged, however, are standard fasteners (3-4) and bearings (2-3).

Pittsburgh: Substantial narrowing here—with these new leads (in weeks): Kraft bags (3-5), multiwall bags (6-8), corrugated boxes (2-3), folding boxes (4-5), nonstandard steel drums (10-12), die cut fiberboard circles (4-5), waterproof paper (3-4). Most alloying materials stay unchanged at 2-3. Ditto, PVC (4).

Leadtimes (in weeks)

STEEL	Now	Month ago	Six months ago
Sheet (Phil)	5	5	5
C-R Sheet (Chgo)	4½	4½	4½
Plate (Phil)	4½	4½	4½
Plate (Chgo)	2	2	2
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5	5	6½
H-R Bars (Chgo)	2	2	2
Cold-Drawn Bars (Phil)	6	6	12
Galvanized (LA)	5½	4½	7
Galvanized (Chgo)	4½	4½	4½
Structurals (Chgo)	2	2	2
Structurals (Hous)	17	17	17
Tubing (Phil)	19	19	19
Grey Iron Castings (LA)	7	7	4
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	7	7	7
Pipe, Carbon (Hous)	26	26	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	9	9	7
ICs (Linear) (Phil)	12	12	16
Motors (Phil)	21	21	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	7	7	13
Relays (Chgo)	15	15	15
Resistors (Chgo)	10	10	12
Resistors, Wirebound (Phil)	10	10	18
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	2	2	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	1/5	1/5	1/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	1	1	2
Naphthalene (Chgo)	2	2	2
Paint (LA)	5	3½	4
Paint, Coil Coating (Pgh)	3	3	3
Paint, Maint. (Clev)	1½	1	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	2	2	2
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	½	1	1
PVC Resin (Pgh)	4	4	4
Titanium Dioxide (LA)	1	1	1½

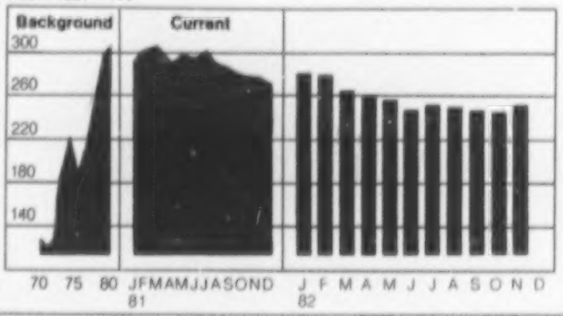
PACKAGING	Now	Month ago	Six months ago
Bags, Kraft (Pgh)	4	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	7	11	11
Cartons, Corrugated (Clev)	2½	2½	2½
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	4½	7	7
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	5	5	6
Shrink Film (Clev)	3	3	3
Drums, Fiber (Pgh)	3½	3½	3½
Drums, Steel, Std. (Pgh)	2½	2½	2½
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	6½	6½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	7½	7½	6
Aluminum Plate (Chgo)	7	7	7
Aluminum Sheet (LA)	5½	6½	10
Aluminum Sheet (Chgo)	8	8	8
Brass Castings (LA)	7	7	4
Brass Rods (Chgo)	2½	2½	2½
Brass Sheet (Chgo)	5	5	5
Brass Tube (Chgo)	9	9	9
Copper Fittings (LA)	4	3½	5½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	4	3½	7½
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	4
Wire, Specialty (LA)	4½	6	5
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	22	22	22
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	52
Compressors, Centrifugal (Hous)	56	56	60
Compressors, Reciproc. (Hous)	45	45	45
Fasteners (Chgo)	½	½	½
Fasteners (LA)	5	9½	6
Fasteners, Std. (Phil)	3½	3½	3½
Heat Exchangers, Carbon-alloy Steel (Hous)	30	30	37
Heat Exchangers, Hi-pressure (Hous)	43	43	46
Insulation Mat'l. (LA)	4	5	4½
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1	1	1
Pumps (Hous)	41	41	41
Pumps (LA)	10	10	5
Rubber, Synthetic (LA)	1½	1½	1
Rubber Hose (LA)	6	5	7
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	13	13	13
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Index: 1967 = 100

Latest month 230.4
Month before 235.5
Year ago 270.5



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	347.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	22.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	22.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	22.15
Steel, bars, dlvd. Phila., cwt., merchant quality	14.35	14.35	14.35
Steel, bars, Pitts, cwt.	14.35	14.35	14.35
Steel, bars, C.R., Pitts, cwt.	31.00	31.00	29.20
Steel, plates, Pitts., cwt.	24.25	24.25	24.25
Steel, plates, H.R., Pitts., cwt.	20.80	20.80	20.80
Steel, sheets, C.R., Detroit, cwt.	24.65	24.65	24.65
Steel, strip, C.R., Chi., cwt.	29.05	29.05	29.05
Steel, basic wire, Pitts., cwt.	23.65	23.65	25.95
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.46	0.45	0.51
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	4.95	4.95	4.11
Brass, red, 85%, [sheet], lb.	1.19	1.19	1.22
Brass, yellow, [sheet], lb.	1.13	1.13	1.16
Cadmium, ton lots, lb.	1.00	1.00	1.40
Copper, electrolytic, wire bars, refd., lb.	0.72	0.68	0.80
Copper sheet, over 24 in., lb.	1.28	1.24	1.31
Lead, common, N.Y., lb.	0.285	0.230	0.310
Magnesium, pig ingot, [99.8%], lb.	1.34	1.34	1.34
Mercury, 20 fl. lots, N.Y., fl.	390.00	378.00	414.00
Molybdenum Climax Oxide/bags, lb.	4.40	5.85	8.50
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	10.35	10.13	8.87
Tin, Straights N.Y., lb.	6.13	6.20	8.08
Zinc, Prime West, East St. Louis, lb.	0.38	0.40	0.42
Zinc, die casting alloy, No. 3, lb.	0.465	0.475	0.505
PAPER			
Bond paper, No. 1 sulfite, water marked, 20-lb., 4 cartons, cwt.	68.60	68.60	68.60
Gummed sealing tape, carton	15.70	15.70	15.70
Offset paper, No. 1 Grade	49.70	49.70	45.50
Folding boxboard, white clay coated 80 bright, ton	377.85	389.40	411.67
Wrapping paper, std. distribution cost, kraft, basis wt. 50 lb., roll	28.00	28.00	21.00
Kraft linerboard, 42 lb., unbleached, ton	250.00	250.00	300.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.243	0.262	0.229
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	0.95	0.97	1.01
Cotton middling, 1", N.Y., lb.	0.615	0.579	0.549
Printcloth, 48", 80x80, N.Y., spot. yd.	0.61	0.55	0.48
Army duck, 37", 13 oz., yd.	1.00	1.00	1.70
Blended printcloth, 64", 78x54, yd.	0.65	0.65	0.76
20s combed yarns	1.70	1.70	1.88
Wool tops, N.Y., lb.	3.60	3.60	3.60
CHEMICALS			
Acrylonitrile, tanks, lb.	0.460	0.460	0.435
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	210.00	210.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.48	1.50	1.48
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.66	0.66	0.66
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	0.101	0.101	0.101
Glycerine, synthetic, tanks, lb.	0.725	0.725	0.865
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.715	0.715	0.715
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.31	0.31	0.42
Polyethylene resin, low density liner film grade (market price), lb.	0.25	0.25	0.26
Polypropylene, homopolymer grade (market price), lb.	0.36	0.36	0.36
Polystyrene, general purpose grade (market price) lb.	0.36	0.36	0.38
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.335	0.335	0.375
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	135.00	135.00	147.50
Sulphuric acid, 66%, commerciel, tanks, ton	56.85	56.85	93.69
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.45	1.45	1.48
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	292.45	292.50	315.06
Lumber 2x2, pine, mbf, cl	277.50	280.05	291.00
Plywood, plyform, 3/4", msf, cl	551.80	554.95	588.10
Plywood, 5/8", msf, cl	334.25	342.29	340.29
Cement, bulk, ton, tl	62.02	62.07	60.98
Sand, ton, cl	5.88	5.88	5.99
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	45.68	45.54	45.13
Crushed stone, 1½", ton, cl	7.77	7.77	7.61
Concrete blocks, send/gravel, 8"x8"x16", ea., tl	0.76	0.76	0.69
Gypsum sheathing, ½"x1"x8", msf, tl	156.82	156.32	153.43
Brick, common, per thousand, tl	172.95	176.15	166.40
Asphalt paving, AC-20	156.77	156.77	167.45
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.61	6.61	6.89
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	23.25	25.75	24.25
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	31.60	33.75	33.75
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.845	0.920	1.010
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.894	0.933	1.003
Heating oil, No. 2, Chi., bulk, gal.	0.870	0.980	0.980
Heating oil, No. 2, N.Y., bulk, gal.	0.94	1.03	1.01
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.15	25.85	25.75
Jet kerosene, gal.	0.87	0.97	8 0.98
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.530	0.525	0.440
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	51.00	51.00	81.00
Steel, No. 1, hvy., dlvd., Chi., ton	44.00	44.00	73.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.565	0.565	0.650
Copper, No. 2, East, wholesale buy, dlvd., lb.	0.505	0.505	0.600
Brass, red, East, wholesale buy, dlvd., lb.	0.525	0.525	0.610
Brass, yellow, East, wholesale buy, dlvd., lb.	0.33	0.33	0.35
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	0.220	0.225	0.260
Alum., mixed clip., E., wholesale buy, dlvd., lb.	0.230	0.235	0.285
Zinc, old, East, wholesale buy, dlvd., lb.	0.080	0.090	0.150
Lead, clean solids, East, wholesale buy, dlvd., lb.	0.11	0.14	0.17
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	5.00	5.00	10.00
Paper, old corrug. box, dlr., N.Y., ton	4.00	4.00	7.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.13	0.13	0.10
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.12	0.12	0.18

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

FORECAST 83

Compiled by Robert S. Reichard, executive editor

Purchasing World's annual economic forecast coverage has been completely revamped this year—both to expand overall coverage and to spotlight changes in what promises to be a year of uncertain transition. To accomplish this, our "Forecast '83" special section presents observations, analyses, and forecasts from seven independent vantage points:

Executive outlook—Dun & Bradstreet's corporate economist and chief statistician, Joseph Duncan, gives a detailed appraisal of Reaganomics and how it will effect 1983 and beyond.

Purchasing World's **economic consultant**—Consulting editor on economics Dr. Louis J. Paradiso provides specific forecasts on GNP, producer prices, and other key macroeconomic indicators.

Specific industries—A survey of industrial leaders reveals their industry-by-industry projections on capital spending, prices, and demand.

NAPM's Business Survey Committee—Some 225 purchasing executives tell what changes they see over the coming year.

Purchasing World **readers**—Respondents to our own survey supply estimates of their firms' procurement cost, demand, inventory, and leadtime trends.

Econometric forecasters—Outlooks from four of the top mathematical modelers are summarized and analyzed.

Detailed price projections—Data Resources, Inc., identifies more than 25 individual price trends over the next two years.

These various forecasts reflect some differences of opinion. But that's only to be expected in a complex, $3 trillion economy poised between recession and recovery. If any consensus can be drawn, it's this: At least the new year will be better than the disastrous 1982.

large when compared to the huge 20% decline recorded here over the past 2½ years.

Also worth noting are the less-than-average price increases indicated for several key industries. Producers, for example, see under-5% price hikes in such major lines as nonelectrical machinery, fabricated metals, instruments, rubber, petroleum, and railroads.

Demand

The same uneven pattern spills over into the demand area as well—and often for similar reasons. Although the big, 15%-plus hike in real sales anticipated by steel mills may seem huge (see accomanying graph), it won't be nearly enough to recoup the big 25-30% tonnage reduction of this past year. And the same goes for the automotive sector, where an 8.4% anticipated real sales gain will hardly put this key industry back to where it was a few short years ago.

Capacity

The survey, aside from price and demand projections, also provides some reassuring figures on availability. Specifically, the current average factory operating rate (68%) indicates pretty much of a no-sweat situation over the upcoming months.

True, operating rates do differ significantly by industry. But it's important to note that of the 17 sectors studied, only one shows a rate in excess of 80%. And even that is deceptive, because the 87% paper industry utilization rate is (by historical standards) far under the industry's preferred level.

Given all this spare capacity, it's no surprise that most companies are not yet ready to embark on any big, new capital spending programs. Indeed, figures suggest that real or deflated outlays could even be off a few percentage points over the new year.

Other factors behind the plant and equipment spending caution, say McGraw-Hill economists, are that (1) balance sheets are badly skewed toward short-term debt, and (2) many companies still face liquidity crises. As their report puts it, "Corporate executives may have deemed 1983 the year to save every penny possible to restore fiscal health."

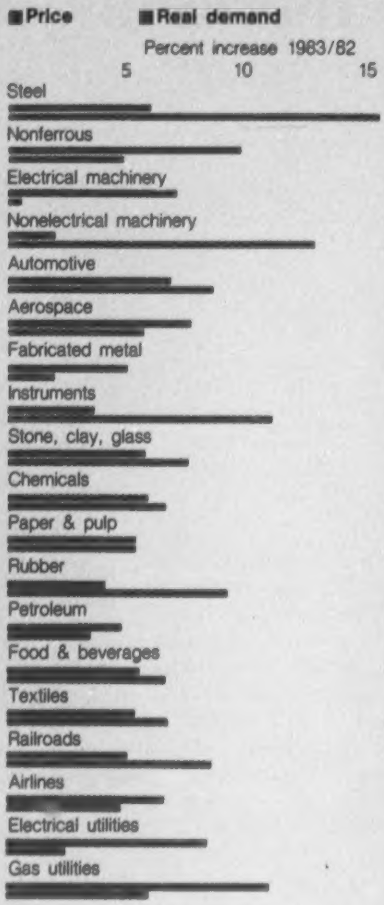
But these same analysts feel that the final results may turn out a little better than the figures suggest. Reason: Such surveys taken in recession years generally underestimate spending during the subsequent recovery.

Productivity

But whether this is true or not, the new study does seem to promise some positive results on the productivity front. For example, some 15.2% of the 1983 capital spending total will be earmarked for efficiency-oriented automated equipment—up from the 13.9% and 14.8% readings for 1981 and 1982, respectively.

And the trend toward automation is even more pronounced in several key industries. Some of the planned 1983 expenditure proportions for this purpose (as compared in parentheses to 1981 levels) are: steel—18.3% (5.5%), electrical machinery—43.7% (35.5%), nonelectrical machinery—33.1% (27.6%), instruments—26.1% (17.4%), and communications—14.1% (9.9%).

How top executives view the new year



Source: McGraw-Hill

NAPM's Business Survey Committee

Wait till midyear

There's good news and bad news from the 250 top purchasing executives who make up NAPM's prestigious Business Survey Committee.

On the plus side, they are still pretty much convinced that 1983 will turn out to be a year of modest business recovery and that prices (while accelerating a bit) won't present any major problems.

But on a more gloomy note, these same pundits see the turnaround as microscopic, nearterm, with most of the gains coming after midyear. They also remain concerned about capital spending; this key contributor to GNP is actually expected to decline—perhaps by a significant amount.

Some of their projections (expressed in terms of qualitative change, rather than "hard" numbers):

- **General business:** Only 25% of the committee members anticipate a "better" situation in the first quarter. But the number grows to 42% when the first half is compared to the last half of 1982—and 59% when all of 1983 is compared to all of 1982. The latter figure is even more impressive when compared to the 11% who see 1983 eventually ending up "worse" than the year just ended.
- **Prices:** Projections here carry only through the first half of the year. But the findings are rather optimistic—with only 29% anticipating price increases over this period. Moreover, all of these boosts are expected to be moderate (40%) or slight (60%)—and mostly selective, rather than across the board.
- **Capital spending:** As suggested above, the figures here leave quite a lot to be desired. All told, some 49% of the NAPM committee project capital spending outlays to fall. In any event, this is the second highest figure in over 20 years, and it far outweighs the small 11% who look for gains during 1983.

Actually, there's a pretty good reason for these downbeat plant and equipment projections. Specifically, nearly one out of every five respondents say that their companies are currently operating at below 50% of production potential. That's in sharp contrast to just a year ago when only 4% found themselves in this excessive overcapacity situation.

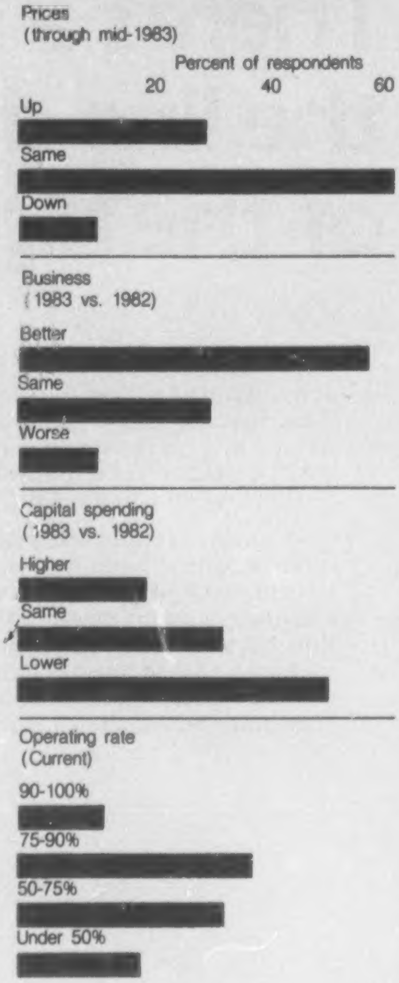
What does it all add up to in terms of GNP growth and inflation? This is not on the list of "qualitative" survey questions. But Charles T. Haffey, chairman of the NAPM committee and Pfizer's vice president of corporate purchasing—weighing all these results and combining them with other relevant input—does come up with some tentative estimates of his own.

On the price front, for example, he figures the average industrial price rise will fall into the 5-6% range. But he hastens to add that there could be a few heftier advances—as many prices that were seriously depressed in 1982 show some significant percentage gains.

But perhaps the best indication of better days ahead—if not over the next few months, then certainly before yearend—comes from survey responses to a question on the state of the economy.

The pertinent figures here: Some 25% are now satisfied or optimistic—up from the 20% and 22% reported in March and September, respectively. Even more impressive is the sharp drop in the number of PMs who openly admit to being worried or pessimistic—from 26% last March, to 16% last September, to only 2% currently.

NAPM view of 1983—from four perspectives



Source: NAPM Business Survey Committee

PurchasingWorld readers

Continued buyers' market

"Things may well bump along at the bottom for a few more months. But by late spring or summer we should be back in the plus column—and without any significant price acceleration."

That's how the purchasing v.p. of a large, Midwestern metalworking firm sees it. And judging from the replies of a nationwide ***PurchasingWorld*** survey, most other industrial buyers seem to be of a similar mind.

Some of the just-completed study's specific findings and projections:

Growth: Nearly two of every three respondents see their own firms' orders and sales increasing in 1983 vis a vis 1982—with 29% putting the advance in the 5%-or-higher category. Most are mildly bullish about overall GNP, too.

Some four out of every five, for example, expect a small, second-half acceleration in real growth—with another 7% going even further, and projecting a "substantially better" July-December period.

1983 prices: There's a surprising amount of agreement on inflation trends, too. Specifically, three out of every five respondents put the year's increase for their own company in the 4-6% range—with only 7% expecting hikes of 7% or more. The average price boost for all respondents (4.5%) is also encouraging and pretty much in line with the findings of another ***PurchasingWorld*** survey taken last month.

1983 versus 1982 prices: There are some differences in expectations here—with respondents split as follows: slight acceleration (4%), significant acceleration (7%), a bit lower (28%), unchanged (11%). Generally speaking, those with a higher proportion of their purchase mix going for basic raw materials expect to experience the biggest boosts.

Second-half versus first-half price trends: Here again a general consensus seems to emerge—as 70% anticipate modest acceleration in the rates of increase after midyear. On the other hand, only a relatively small 9% see any big, new price explosion at that time. The fact that the remaining 21% see no acceleration (or even some deceleration) also has to be regarded as a good omen as far as overall price trends are concerned.

Inventories: No meaningful increase is planned here—at least not over the next few quarters. Indeed, if purchasing manager intentions are carried out, industrial holdings should continue to shrink, nearterm. Some 48% of surveyed buyers plan to pare in the months immediately ahead—more than five times the number who contemplate increases. Behind this hand-to-mouth strategy: ample supplies and high interest rates, plus the general uncertainty as to the actual timing of the coming business recovery.

Delivery performance: The fact that more purchasing men see delivery time speedups (35%) than stretchouts (22%) would also seem to validate their conservative stocking approach. That's not to say, of course, that buyers don't expect some tightening as 1983 wears on (close to 25% say they expect spotty problems before the end of the year). But for the most part, they say that these will stem more from supplier foot-dragging in upping production runs than from any inherent capacity shortfall.

The "Reaganomics" scorecard: The Administration generally gets high marks for knocking the props out from under inflation—with some 83% saying the program has been extremely effective. But there's pretty much of a split when it comes to rating the Administration on growth—with 36% saying the program has been a failure and another 41% rating it just "so-so."

To be sure, there are a few who feel the program will eventually be a success. These respondents say it takes time to reverse decades of mismanagment, and that we will eventually see the benefits of the supply-side approach—perhaps by as early as the second half of 1983.

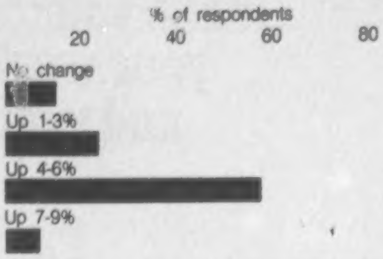
But whatever the buyer feelings on the efficacy of the Reagan approach, most are pretty much agreed on their overall purchasing strategies for the new year. In a nutshell, they expect to play what they see as a continuing buyers' market for all it's worth.

This, in turn, points to continued emphasis on such time-tested ploys as (1) longrun contracts with extended price guarantees, (2) closer looks at cheaper imports, (3) the questioning of each and every proposed price increase, and (4) tighter-than-ever inventory controls.

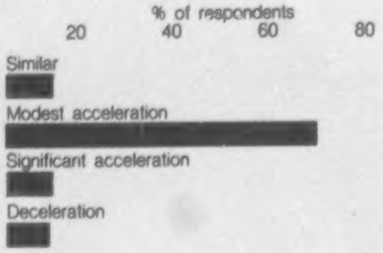
On the latter score, several talk of instituting a modified "Kan-Ban" Japanese-style inventory control system. Taking off on this, one PM says that he is putting more and more emphasis on split deliveries—with materials and parts arriving closer to the time they are actually needed on the production floor. Comments also suggest improved monitoring of company and industry production and sales forecasts.

Prices

All of 1983 vs. all of 1982

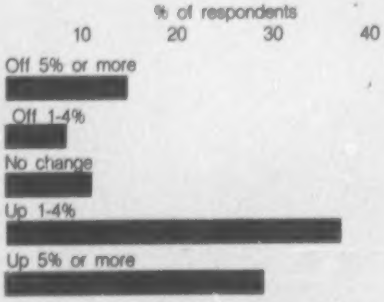


1st half 1983 vs. 2nd half 1982

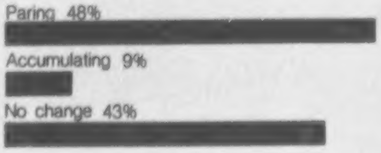


Demand

Company output (1983 vs. 1982)



Inventories (nearterm strategy)



Source: PurchasingWorld

Econometric forecasters

Agreement on slow growth

The nation's sophisticated econometric models are in surprisingly close agreement about where we're headed over the next two years—at least as far as the "big-picture," macro indicators are concerned.

The general consensus from the major econometric forecasters is: (1) rather slow 1983 growth with some 1984 acceleration, (2) continued quite moderate inflation rates, and (3) lingering unemployment and interest-rate headaches.

Lest there be any doubt on this consensus among the big economic think-tanks, take a look at the accompanying table, which spells out the projections of four of the nation's leading model-oriented forecasting firms. Note, for example, that less than half a percentage point separates 1983 real GNP growth projections (which now run in the tight 2.7-3.0% range) with the average put at near 2.9%.

This, incidentally, is almost a full percentage point under the 3.8% GNP increase that was projected for the upcoming year in mid-1982 when these same four outfits were queried.

In any event, the near unanimity of these powerful econometric forecasting models (each with their hundreds of complex mathematical equations) would seem to refute some of the pollyannish talk coming out of Washington these days about a fairly brisk 1983 recovery.

But if these econometric forecasts aren't all that bullish about the new year, they do seem to suggest a tolerably good 1984. Indeed, GNP projections for that year have actually been raised. The pertinent figures here: a 4.5% average increase now versus the 4.1% estimate made just six months ago.

The price outlook also remains fairly encouraging. In fact, all three of the country's major inflation indexes (the GNP deflator, the producer price index, and the cost-of-living index) all point to a rather similar 1983 pattern—with average gains running in the 5-6% range.

True, all four of the surveyed econometric models expect to see somewhat bigger price advances in 1984. But the acceleration will be surprisingly moderate considering the heftier growth anticipated for that year.

Generally speaking, the price rise estimates for 1984 run in the 6-7% range—suggesting only about one percentage point acceleration over 1983., They are also just about in line with rates anticipated for that year when PW asked the same question six months ago.

But if inflation does not present any problems, the same can hardly be said about interest costs and unemployment. The former—as represented by the prime rate—is expected to average in the 10-12% range over the next 12 months with very little relief anticipated for the following year. Indeed, only the Wharton model sees some modest 1984 falloff—and even then only the still-disturbing 9% level.

Several factors are cited for these high rates; notably, (1) the near-certainty of more federal borrowing, (2) some modest acceleration in the demand for funds from businessmen and consumers, and (3) the feeling that the Fed isn't about to ease up enough to rekindle still-smoldering inflationary fires.

About the only solace that can be derived from these projections is that they are two or three percentage points under levels predicted only six months ago (before interest rates began to recede).

But on a more sobering note, this still-far-from-easy monetary scenario (a major factor behind slow 1983 growth projections) is also expected to keep the jobless rate high. Forecasts here point to about a 10% unemployment rate over the new year, with only a slight decline to 9% in 1984. These estimates, by the way, are more than one percentage point higher than those made in mid-1982.

How the big econometric models see 1983 and 1984

	1983	1984
Real GNP (% change)		
Data Resources Inc.	2.9	4.1
Chase Econometrics	3.0	3.8
Wharton	2.8	5.2
Merrill Lynch	2.7	4.9
4-Model Average	2.9	4.5
Industrial Production (% change)		
Data Resources Inc.	4.8	7.5
Chase Econometrics	2.0	5.2
Wharton	1.4	7.3
Merrill Lynch	3.7	8.3
4-Model Average	3.0	7.1
GNP Price Deflator (% change)		
Data Resources Inc.	5.8	6.0
Chase Econometrics	5.4	6.6
Wharton	5.5	6.0
Merrill Lynch	5.6	6.2
4-Model Average	5.6	6.2
Producer Prices (% change)		
Data Resources Inc.	4.7	7.6
Chase Econometrics	5.4	7.8
Wharton	4.9	7.0
Merrill Lynch	4.3	5.9
4-Model Average	4.8.	7.1
Prime Interest Rate (%)		
Data Resources Inc.	12.2	12.2
Chase Econometrics	11.8	11.7
Wharton	10.2	9.0
Merrill Lynch	10.4	10.9
4-Model Average	11.2	11.0

Finally, a word on the accuracy of all these forecasts: These econometric models have been wrong in the past. But the fact that all are in such basic agreement this time around suggests that any return to a full-employeemnt, low-inflation economy is still nowhere in sight.

Detailed price projections

Wide variations in price boosts

Look for price boosts to vary all over the lot—not only over the next four quarters but well into 1984, too.

That's what the latest Data Resources, Inc. (DRI) quarterly forecasting model suggests. Note in the accompanying table, for example, that the big consulting firm's computer-generated annual rates of increases range from a low of 2½% (in the case of some electronic components) to more than 10% (in the case of some of today's seriously depressed raw materials).

As far as overall averages are concerned, DRI analysts say their product-by-product price forecasts will result in about a 5% increase in the bellwether industrial producer price index over the coming year—about double the estimated 2.7% advance for the year just ended.

And there could be further acceleration over the subsequent year (1984) when industrial price averages are projected to rise about 7½%. But even this has to be regarded as moderate—certainly nothing like the double-digit 10.7% increase reported for 1981.

But these averages can be misleading as the business pickup hits various product lines at different times. With this in mind, here's a more detailed rundown on how DRI sees things shaping up over the next two years.

- **Refined petroleum products:** Demand will slowly increase in line with the small 2.9% increase expected in real GNP this year. But the oil glut will limit the extent of any price advance to only 1.1% in 1983. The following year, however, should see considerable acceleration—to near a 6.7% compound annual rate (CAR).
- **Natural gas:** Continued double-digit increases—albeit not quite as large as those posted in recent years—seem inevitable in view of gradual deregulation. Best bet here: a 12.8% CAR of increase through the end of 1984.

Expect about a 5% increase in the industrial producer price index over the coming year.

- **Steel:** The government index of steel mill products should be rising at about an 8.8% annual rate over the next eight quarters—with somewhat smaller advances anticipated for galvanized sheet (8.1%) and carbon bars (8.5%).
- **Foundry shop products:** Some fair-sized advances are likely. Examples: Standard malleable iron castings could show a 10.8% CAR over the next eight quarters—with an almost-as-large 10.2% CAR seen for steel forgings. But grey iron foundries should end up with a more moderate 6.4% CAR.
- **Copper:** Hefty 7.2% and 7.9% quarterly increases are being projected for the first and second quarter of the current year, respectively. After that look for more moderate increases—but still enough to push quotes to near 95¢/lb by the end of 1984.
- **Aluminum:** Relatively small increases over currently depressed ingot levels are forecast over the next two quarters—3.7% and 2.9%, respectively. After that, count on more significant acceleration—to the point where prices by the end of 1984 could be running better than 30% above current levels.
- **Zinc:** Stability is anticipated over the next six months—followed by some substantial increases as production activity in the metal's two major markets (autos and construction) gains momemtum.
- **Nonferrous wire and cable:** Better demand, plus rising basic metal prices, point to these significant quarterly increases over the forecast period (now through the end of 1984): copper-based products (2.5%) and aluminum-based products (2.4%).

- **Hardware:** Increasing demand pressure from the transportation sector (notably autos) will allow producers to escalate at fairly fast rates—averaging out at near 1.7% per quarter—resulting in a 6.5% CAR over the forecast period.
- **Abrasives:** Relatively moderate cost pressures will combine with weakened demand (especailly from the clay, glass, and stone products sector) to hold increases to an average 1.0% per quarter through the next two years—making for a very low CAR of only 3.7%).
- **Paper products:** Relatively restrained increases are also seen for corrugated—4.8% on a CAR basis over the forecast period. A similar 5% CAR is anticipated for bond paper over the same period.
- **Industrial chemicals:** A very gradual consumption pickup will limit price gains here—with only about a 6.7% CAR anticpated from now through the end of 1984.
- **Construction materials:** Prices will gradually accelerate. A couple of the projected increases for 1983 and 1984: sheet metal products (4% and 6.2%, respectively), plastic construction products (4% and 7.5%).
- **Material handling equipment:** Look for average quarterly increases of 2.4% this year—with the upward impetus coming from previously absorbed cost pressures—plus gradually improving demand from the electrical, nonelectrical, and construction equipment industries.
- **Electronic components:** Some prices may continue to fall or rise only very modestly—despite anticipated demand increases. This is especialy true of the digital MOS and linear IC areas. Transistors are also expected to show very modest gains—2.4% over the next four quarters, and 5.8% in 1984.

A gradual consumption pickup will limit price gains for industrial chemicals.

The Price Outlook into 1985
(Comparison of first quarter pricing)

	Price increase (percent)			
	82/81	83/82	84/83	85/84
RAW MATERIALS ENERGY				
Supplies for manufacturing	7.7	3.6	7.2	8.7
Processed fuels & lubricants	4.3	2.2	7.8	9.6
Miscellaneous chemicals	7.5	5.0	2.9	7.8
Diesel to comm'l customers	4.7	–4.5	11.4	3.9
Railroad freight	10.3	1.8	5.4	9.2
METALS				
Grey iron foundries	5.0	2.4	6.4	7.9
Wire and cable	–1.3	–0.7	14.1	10.6
Aluminum extrusions	–0.1	0.4	9.3	11.3
Steel plates, heavy, carbon	13.3	0.3	11.8	10.2
Copper, foreign	–13.2	–1.7	20.0	11.3
COMPONENTS				
Containers	6.3	2.4	7.2	7.9
Soda ash	2.5	11.3	13.5	9.4
Truck tires	2.7	3.8	8.0	8.6
Ball and roller bearings	10.7	6.2	7.6	10.4
Bolts and nuts	4.9	4.7	6.7	6.2
Transistors	2.1	–3.4	2.4	5.8
CONSTRUCTION MATERIALS				
Plastic construction products	–2.0	–0.6	7.0	8.9
Concrete products	3.3	3.5	6.9	8.8
Plumbing fixtures	7.1	3.7	8.7	7.8
Flat glass	5.8	3.3	4.7	8.0
EQUIPMENT				
Mining machinery	8.7	5.5	10.4	8.1
Construction equipment	9.2	4.8	7.7	10.4
General purpose machinery	7.4	3.5	8.0	9.8
Motors and generators	7.2	5.6	9.1	10.3
Air conditioning & refrigeration	5.0	3.8	8.3	10.7

Note: Selected from more than 200 wage and price forecasts, which are available at a quarterly frequency and are updated quarterly.

Source: Data Resources, Incorporated Cost Forecasting Service.

PurchasingWorld

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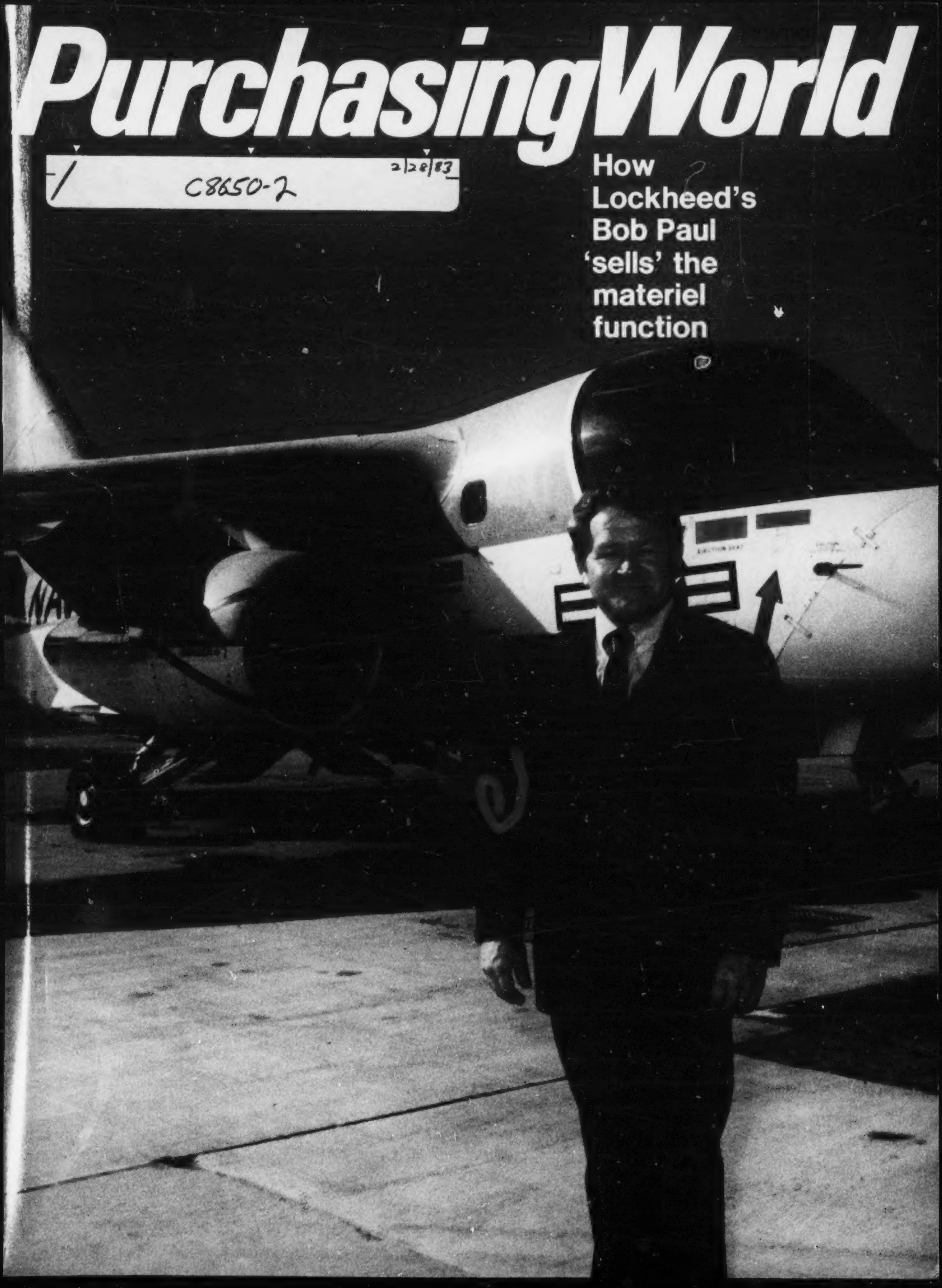
How Lockheed's Bob Paul 'sells' the materiel function



PurchasingWorld

Vol. 27, No. 2 - February 1983

Helping yo
manage
the busine
of buying

9 *PW* Predicts
Labor costs are major key to low prices

17 Datatrak
Key economic trends 17
Current prices 18
Steel scene 20
Procurement status 24
Leadtimes 26
Spot market prices 28

32 To 'sell the function,' have something to sell
To convince management and other departments of its vital role, Lockheed California's materiel department backed up an image-building campaign with solid data on its own accomplishments and needs.

35 Move ahead with topnotch training
At Digital Equipment Corp., an aggressive training setup arms purchasing people for competitive, innovative performance.

39 *PW* TechFile: Self-clinching fasteners
Are the equivalents *really* equivalent? Here's a discussion of seven points of comparison that will help you answer that question.

40 Saving money on inbound transportation
Trucking companies face a number of costs in getting your freight delivered. Knowing what these costs are will help you find ways to keep them low—and add to your company's profits.

44 1983 demand gains won't ease
The overall business curve may be about to turn up, but most of today's pervasive buyers' markets aren't likely to disappear any time soon.

45 Measuring performance? Look at the whole system
Ordinary performance reports weren't adequate for Monsanto Manufacturing management—so corporate purchasing came up with guidelines that enable individual plants to evaluate the whole materials cycle.

49 Products

54 Book reviews*

68 Purchasing Law
Trouble with the purchase order forms

70 Negotiations
Negotiating leadtimes with MRP

72 Calendar

74 Value Analysis
Tell your management

76 *PW* Perspective
Companies and their employees appear to be headed in different directions

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* Metalworking issue only

PW PREDICTS

Robert S. Reichard, executive editor

Labor costs major key to low prices

Things are beginning to look a lot more comfortable on the labor-cost front.

Weakened unions, for example, are not about to up the ante. And nonunion workers will be at an even bigger disadvantage in today's double-digit unemployment climate. All told, current trends suggest about a 5.5% advance in pay rates this year—just about in line with last year's surprisingly low level.

The end result is likely to be a lot less upward cost pressure this time around. The combination of slowly climbing production—combined with a reluctance to rehire laid-off workers—could make for about a 2% increase in worker efficiency. Superimpose this on an anticipated 5½% pay hike, and you end up with only about a 3½% increase in unit labor costs.

Other significant factors pointing to labor cost moderation: (1) increasing resistance on the part of many firms to lock themselves into cost-of-living escalator clauses, (2) downgrading of costly benefit programs, and (3) rethinking of wage strategies, with the emphasis on tailoring pay hikes to productivity rather than to overall inflation or the pay scales of rival firms.

All of these factors will play a role in holding prices down. Most economists equate labor costs with the underlying rate of inflation, noting that worker compensation accounts for nearly 70% of every sales dollar.

Other factors also suggest moderating prices in the months ahead. These include:

- The lack of any demand-pull pressure. Even if GNP rises by 3%, factory operating rates will be hard put to approach even the 75% mark—not nearly high enough to eliminate today's pervasive buyers' markets.
- A further modest decline in interest rates: A recent survey of 36 financial analysts, for example, suggests that the prime rate will be down near 10% by spring.
- Strong import competition: The combined impacts of a strong dollar, poor overseas domestic demands, and decelerating global inflation suggest continued attractive prices for foreign goods. U.S. vendors will have to think twice before attempting new price boosts.
- Glutted oil markets: Further advances in world crude tags are unlikely. Indeed, another $1-2/barrel could be knocked off the going price by late winter or spring.

It's no coincidence almost all 1983 forecasts these days call for only a 5-6% rate of inflation. Indeed, these figures may prove to be on the high side if economic recovery lags current expectations.

ABS resins

Current 95¢-$1.05/lb lists are unrealistic—the resin is reported selling for only half that price in its pipe grade. The big problem, of course, has been the nosedive in demand (off 15% last year)—enough to push operating rates to 60% or even lower. Not only are most enduse markets weak, but PVC is making sharp inroads into ABS's traditional markets in housing and construction.

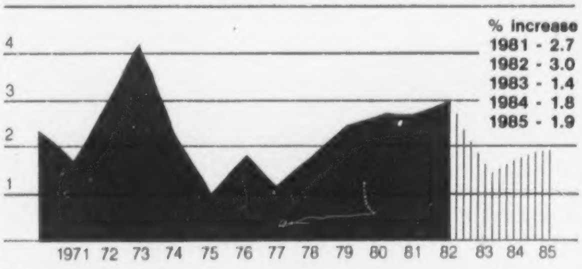
Copper

No sustained nearterm growth really seems likely—not with the absence

Paper

Paper and paperboard capacity

Percent increase over the previous year



Source: API, PW estimates

Paper and board capacity should remain more than ample through 1983—and probably into 1984 and 1985 as well.

Latest supply-demand estimates tell the story:

- On the capacity side—the industry (undaunted by a dismal 1982) will be adding new potential at a 1.7% annual rate over the 1982-85 period.
- On the demand side—even if you accept some of today's relatively optimistic GNP projections, the overall use of paper and board will only grow at a 3.7-3.8% rate over the next few years.

Superimpose this outlook on currently low operating rates (87% for paper and 84% for board), and it looks like a "no sweat" situation. By no stretch of the imagination, for example, is the industry likely to reach its preferred mid-90s utilization rate anytime soon.

All this, in turn, would seem to suggest that prices will continue to be negotiable. On the other hand, the industry—hit in 1982 with a sharp drop in earnings—will certainly try to raise prices at the earliest opportunity.

PW PREDICTS

Zinc

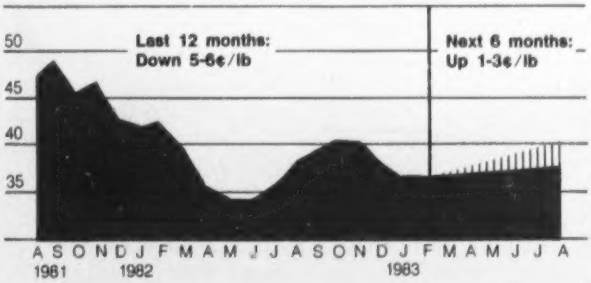
CURRENT SITUATION: Sagging consumption tells the story. U.S. chewup in the year just ended slipped to only 748,000 tons—off a sharp 19% from 1981 levels. Domestic production declined by an even larger 26%. Not surprisingly, prices have turned quite soft after some late-summer 1982 strength. **Producer metal in recent weeks was going for as low as 36¢/lb.** In the merchant market, the price situation is even more bearish—with some prices as low as 34¢/lb.

DEMAND: The new year looks somewhat better as housing and autos (the metal's two biggest markets) **show a fair amount of improvement.** Domestic consumption could rise to near 860,000 tons. That's 15% above depressed 1982 levels, but **still far under the 1,158,000 consumption peak hit in 1978.** Longrun gains will also be modest—perhaps only 3% a year—as Galvalume (an aluminum-zinc product containing only 43.4% zinc) cuts into traditional galvanizing markets.

SUPPLY: There's more than enough to go around as global output continues to increase (up 6% in 1982). And the situation isn't likely to change very much over the next few quarters as more non-U.S. capacity comes on stream in 1983. **On the other hand, U.S. capacity continues to shrink—and isn't nearly enough to meet domestic demand.** Upshot: increasing dependence on imports. Incoming shipments could rise to 510,000 tons this year—and perhaps to over 800,000 tons by 1987.

PRICE OUTLOOK: Any domestic consumption pickup is bound to be translated into higher tags. But the advance will be slow given the current supply-demand imbalance. A lot will depend on overseas demand. **Best bet: A slow climb to near 40¢/lb by summer**—with a further advance to near 45¢/lb possible by yearend. The latter quote would still be under the 48¢/lb peak of late 1981.

Zinc
Cents/lb

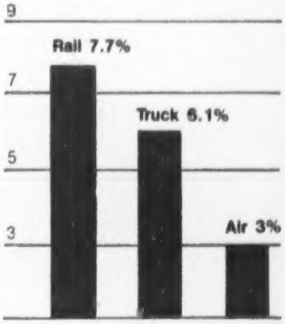


of any interest on the part of buyers both here and in Europe. Also, stocks (particularly on the exchanges) remain at uncomfortably high levels. Blame much of the latter on continued high production overseas—something which is offsetting U.S. production cutbacks that have dropped domestic operating rates down to near the 60% level. True, there could be some demand improvement in the second quarter—aided by some hedge buying to beat a possible U.S. work stoppage this coming summer. But it won't be all that much. Indeed, even if you factor in some pickup in European and Japanese demand later this year, the 1983 Free World refined copper total is not likely to rise much above last year's 6.9-million-metric-ton figure. Upshot: Prices will be lucky to reach 80¢/lb by yearend.

Transportation

This hard-pressed industry is looking forward to a somewhat better 1983. But gains will come more from increased activity (engendered by the expected business recovery) than from rate increases (which will be held down by continuing intermodal competition). Here's a rundown of new Commerce Department estimates detailing the anticipated 1983 revenue gains: (1) rail freight, 7.7%—aided by better coal and grain shipments; (2) trucking, 5-7%—with a moderation in wage demands and steady fuel prices beefing up overall profitability; and (3) overall air transportation, where a 3% revenue is anticipated. Also likely to aid the transportation industry are projected 1983 declines in the workforce—2.2% in the case of the railroads and 2.7% for the airlines.

Transportation revenue increases
1983 vs. 1982



Aluminum

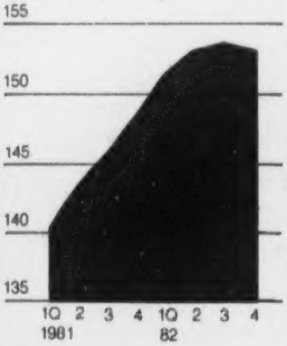
Buyers are still firmly in the saddle. Signs of the time: (1) Merchant ingot remains mired in the mid-40s range, (2) hefty discounting persists in virtually all fabricated metal areas, and (3) non-U.S. producers are still dragging their feet in instituting production cuts. Equally disturbing to the industry: Free World stocks remain in the high 3-month supply range. U.S. primary metal shipments—off some 8-9% in 1982—also continue to disappoint. True, producers are counting on a spring-summer pickup. But projections calling for as much as a 12% advance (to 6.9 million tons) do seem a bit optimistic. This, in turn, suggests only a gradual price recovery—

with ingot for the year as a whole averaging out at only 55¢/lb or so.

MRO supplies

Distributors say prices have been levelling off—with little or no change in overall averages noted since late last summer (as measured by NIDA/SIDA). Officials of these industrial distributor groups add that many attempted price hikes have failed to hold up. Also suggesting a weak market: (1) increased discounting, (2) the guaranteeing of prices for about three months, and (3) the setting of upper limits on some anticipated price advances.

MRO prices
(Index: 1977=100)



Steel

Buoyed by forecasts of improved auto and housing markets, most mills are now talking in terms of a 70-72 million-ton shipment year—up substantially from the dismally low 60-million-ton-plus level of 1982. Improvement will come not only from higher consumption but also from (1) reduced imports, which could be off 1-2 million tons, and (2) a shift from inventory paring to stability—or perhaps even some fractional accumulation. But most of the gains will occur later on in the year—so currently weak prices are likely to persist for a while. And even then, any increases will most likely be in the form of narrower discounts rather than any boost in official lists.

Polypropylene

Last year's big 7% drop in demand has taken its toll; market or transaction prices are down 2-5¢/lb from early-1982 levels. More important, quotes are likely to remain weak on a combination of shaky feedstock (propylene) costs, disappointing demand, and customer resistance. Prices for the general purpose grade, for example, should run as much as 8¢/lb under the official 42¢/lb producer list through early spring.

Energy

New studies suggest that continuing decontrol will drive up natural gas twice as fast as other major energy sources in 1983. The Department of Energy, for example, is talking in terms of a 17% rise this year for the clean-burning fuel—far above the 6% and 8% advances seen for heating oil and electricity, respectively. The latter figures incidentally, are confirmed by a private research outfit (Cabot Consulting Group), which

Building materials

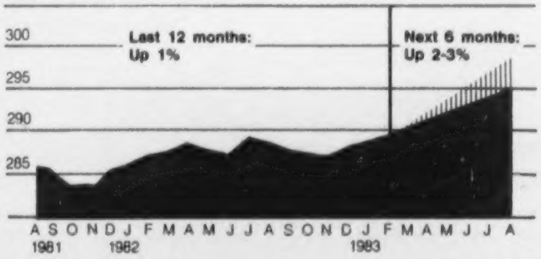
CURRENT SITUATION: **Last year was disastrous,** with demand down virtually across the board. Some typical 1982 declines: cement (6%), brick and structural clay (13%), gypsum products (8%), sheet metal work (6%), and overall lumber (9%). The resulting capacity glut has also put **a damper on price rises—with the all-material average virtually unchanged from year-earlier levels.** In some areas, prices are actually down. Softwood lumber, for example, is off some 5% from early-1982 levels.

DEMAND: **Better days lie ahead as lower interest rates spur construction activity.** Right now, projections call for as many as 1.4 million housing starts—a substantial jump over the less than 1.1 million of 1982. **This, in turn, should bring about a 10-12% increase in softwood lumber demand.** Some other projected 1983 increases: flat glass (7-9%), cement (2-4%), brick and structural clay tile (18-20%), and gypsum products (9-11%). **Only fabricated structural metal is likely to decline**—as office building and other heavy construction drifts lower.

SUPPLY: **No problems anywhere.** Reason: While the physical volume of overall construction will be up about 4-5%, total activity will be some 15% under the levels prevailing as recently as 1979. **The glutted situation is particularly apparent in cement.**

PRICE OUTLOOK: **Modest advances would seem to be inevitable as producers use a slowly firming market to press along previously absorbed cost increases.** Some anticipated average 1983 price increases—based on a Data Resources, Inc., forecast: asphalt roofing (1.9%), glass (2.8%), insulation materials (2.4%), plastic construction products (4.8%), structural steel shapes (4.6%), rebars (2.4%), copper wire and cable (4.8%), portland cement (6.5%), sand, gravel, and stone (4.8%), plumbing fixtures (6.2%). **It adds up to about a 5% overall hike.**

Building materials
Index: 1967=100

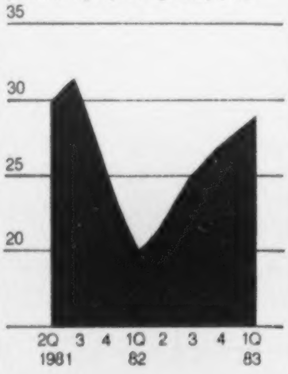


PW PREDICTS

projects a similar 6% increase in heating oil and only a slightly higher 9% advance in electricity rates.

Polyvinyl chloride

Producers have not been able to get all of the 4¢/lb increase posted at the beginning of the year. Buyers say they're paying only 1-2¢/lb more for the material. Once reason: continuing low, under-70% operating rates. But demand should eventually improve—enough to push 1983 volume up some 6% to near 5.9 billion lb. Longer run, the industry talks in terms of a 7% growth rate, which would be enough to push operating rates to near 80% by 1985. Biggest gainers will be PVC building materials such as siding, window frames, and gutters and downspouts.



PVC market prices
(General purpose grade) ¢/lb

Machine tools

Press for lower financing rates—both from domestic and Japanese producers. Some of the latter sellers now offer rates as low as 5% on two-year loans. Nor is the easiness likely to disappear anytime soon—not if current government 1983 shipment projections are anywhere near correct. They suggest upwards of 30% declines in both the cutting and forming tool sectors of the industry as business continues to pull in its capital spending horns.

Petroleum

The continuing glut—aggravated by the failure of several OPEC nations to adhere to production quotas—just about rules out any price advance. Indeed, there's a good likelihood crude tags could fall a few dollars a barrel over the next few months—to bring them more in line with currently weak spot market quotes. The relatively mild weather so far this winter in most areas of the world also adds to the downward pressure. Also worth noting: If tags do fall, they would help offset much of the 5¢/gallon excise tax booster on gasoline scheduled to go into effect in April.

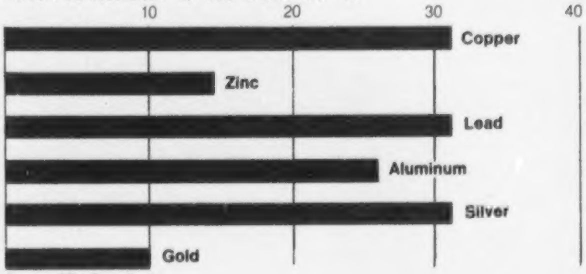
Mini-pickup trucks

Good bargains are popping up everywhere as Japanese and U.S. producers wage an allout battle for this lucrative market. One Japanese firm, for example, has just announced a 4% cut in some models. In any case, most Far Eastern models have been cut to where they now average several hundred dollars under competing domestic vehicles. And U.S. makers are fighting back—offering rebates and stripped down mini-trucks selling for under $6000. In short, it's a market where shopping around can pay off handsomely.

Lead

The market has bottomed out—though at the very low 20-21¢/lb level (far under the breakeven points of most producers). On the other hand, there is little indication of any sustained nearterm bounceback. U.S. primary stocks continue to rise—reflecting in large part an 18% gain in domestic production over the past year. Battery inventories are equally excessive—so that not even a prolonged cold snap is likely to benefit lead producers. Sagging consumption, of course, is the real problem—with Free World use off in the year just ended. All this, in turn, suggests a relatively slow price recovery—so slow, in fact, that the heavy metal will be hard put to reach even 25¢/lb over the next 3-6 months. ***PW***

Nonferrous metals



1983 nonferrous price increases

Percent increase Dec. 15, 1982 to Dec. 15, 1983

Source: CRU Consultants

Brace for some fairly significant metal hikes.

So warns CRU Consultants after surveying more than 50 top metal producers, consumers, and traders. The big New York-based nonferrous consulting firm asked these experts to predict where key metal prices would be on Dec. 15, 1983—with prizes to be awarded at that time to those closest to the mark in each category.

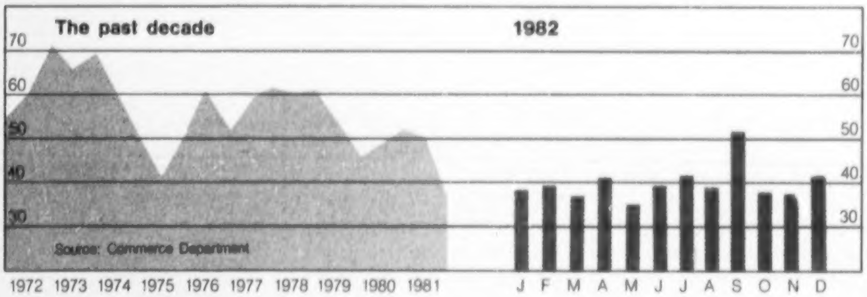
While there were a handful of bears to tone down the generally bullish sentiment, the following December 1983 levels suggest a strong upwards trend: copper (86¢/lb), zinc (44¢/lb), lead (27.75¢/lb), aluminum (59¢/lb), silver ($13.23/oz), and gold ($481/oz).

The actual percent increases over December 1982 levels (detailed in the chart) are equally impressive—ranging from 10% for gold to over 30% for copper, lead, and silver.

BUSINESS DATATRAK

NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



KEY ECONOMIC TRENDS

Indicators point to modest recovery

More and more indicators are beginning to point to a modest recovery—if not over the next month or two, then certainly by spring or early summer.

This is probably most apparent in so-called composite indicators—those that combine new orders and other series that traditionally have called the turn on nearterm business trends. The NAPM Business Barometer (see chart), for example, has moved up to near 41—a four percentage point advance over the previous reading.

To be sure, this is still under the "neutral" 50 markand even further below the 60-and-higher levels of previous years. But it's at least a step in the right direction. And the improvement is confirmed by another overall barometer (Uncle Sam's composite index of leading indicators), which also has been moving up.

Prime interest

Zero in on some of the key individual series that make up these all-inclusive yardsticks, and the same encouraging signs are apparent. The prime interest rate, which has dropped more than five percentage points over the past six months, is a case in point (see chart). And most financial analysts see another percentage-point-or-two decline by early spring.

This, in turn, can be expected to buoy housing starts which, incidentally, have already been heading higher. Indeed, if the downtrend in mortgage rates can be maintained, housing starts could wellmove up into the 1.4-million-unit range thjis eyar—a significant advance over 1982's extremely disappointing 1.5-million-unit total.

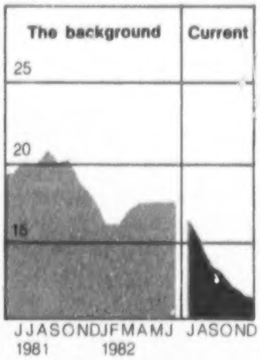
Unfortunately, consumer purchases in other areas (notably big ticket durable items) may not follow the same pattern—primarily because of continuing double-digit unemployment rates. The widely-monitored "Consumer Buying Plan" index, for example, continues to hover well under levels prevailing just a year ago (chart)—suggesting that any nearterm pickup in autos and major appliances won't be all that impressive.

But some of this consumer caution is being offset by gradually improving business confidence. The Conference Board's "Business Confidence" index has moved up four months running now—a trend which is also confirmed by a new Dun & Bradstreet survey of top executives (more details in following story). If this confidence is borne out, it could even make for a bottoming out in capital spending before too long.

Leading indicators

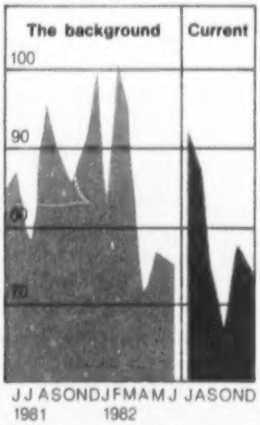
1. **Prime borrowing rate**

Percent

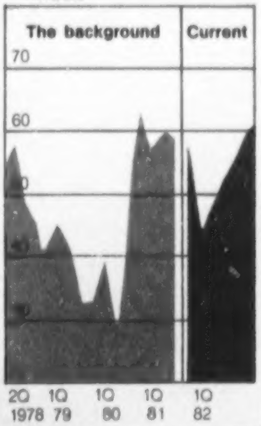


2. **Consumer buying plans**

Index: 1969=100



3. **Business confidence index**



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What does it all add up to? Best bet: a slow 2-3% advance in real GNP by yearend—with perhaps a slightly larger 3-4% rise in industrial output over the same period.

Confidence in business pickup grows

The nation's top corporate executives are becoming somewhat more optimistic about nearterm business prospects.

Dun & Bradstreet's first quarter 1983 "Business Expectations" survey tells the story. Specifically, respondents in the key manufacturing sector who see sales increases relative to a year ago are three times as numerous as those who feel the January-March period will lag behind early 1982.

Unfortunately (at least for buyers), this pickup could also mean somewhat higher price tags. Indeed, the number of vendors contemplating hikes vis a vis a year ago outnumbers those anticipating decreases by an even wider margin—nearly 5:1 in the case of durable products, and 8:1 for nondurables (see accompanying chart for details).

Inventories

The outlook for inventories is also about to change. In the case of durables, for instance, survey findings suggest that as many firms now expect to increase their holdings as do those planning on further cutbacks. And in the nondurable sector, more modest accumulation may actually be in the making.

Another bullish finding: A growing number of companies expect new orders to increase over the first three months of the year (again relative to a year earlier).

But all these gains will be from very low levels. This can perhaps best be appreciated by looking at D & B's "Sales Optimism" index (the percentage of all firms expecting a sales increase less those anticipating a decrease). The latest reading here is 37%—above the previous quarter, but still far below the 60% peak hit back in mid-1981.

R & D spending gets priority

Research and development continues to get top priority despite the current recession and sagging earnings reports.

Indeed, the new year could well see a fair-sized 8.2% advance, bringing overall R & D cash outlays to a peak $83.6 billion. At least, that's how the Battelle Memorial Institute sees things developing in this crucial industrial sphere.

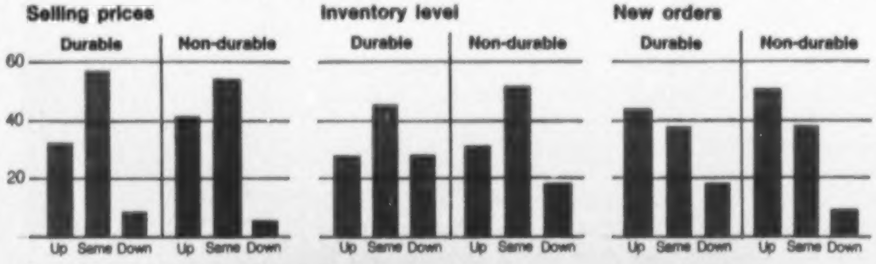
According to an institute spokesman, this should be enough to allow for some real gains, too. R & D inflation over the next year or so is put at only 4.5%. In fact, the implied 3.5% real gain is slightly higher than the nine-year average real rate of 3.3% that has prevailed since 1973.

Funding

On a source-of-funds basis (see accompanying chart), industry is expected to provide about half of the overall money—with Uncle Sam providing most of the rest (47%).

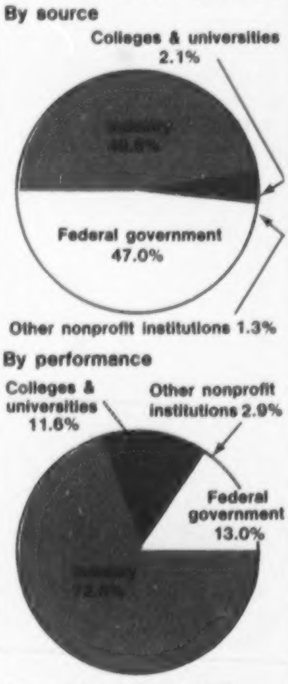
In any event, private company R & D will be heavily self-funded in the manufacturing sector where, on average, only 32% of the total will be supported by the federal government.

How readers see early 1983 (1st quarter 1983 vs. 1st quarter 1982)



Source: Dun & Bradstreet Business Economics Division

R&D: The 1983 outlook



Source: Battelle's Columbus Division

CURRENT PRICES

Industrial averages remain stable

The new year is beginning where the old one left off, with industrial price averages holding virtually stable at low fourth-quarter 1982 levels.

That's not to say that everything has remained unchanged. There have been a few increases (see table), but they have been effectively offset by declines in other sectors.

On the latter score, the weakest area now appears to be energy, where some fairly large slippages were

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recorded over the past month—3.1% in the case of lube oils and almost-as-significant declines for residual fuel oil (2.8%) and gasoline (1.7%). Also heading lower here were heating oil, liquid petroleum gas, and crude oil. Only electricity continued to advance in the energy sphere.

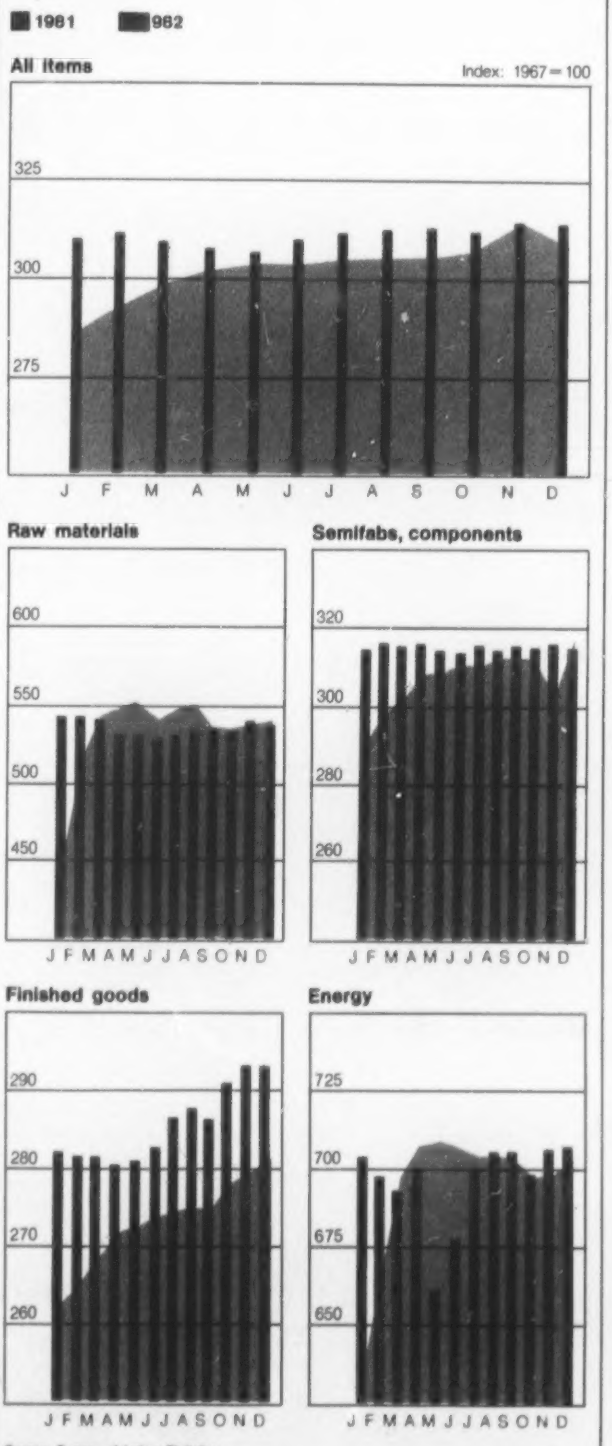
Other product lines exhibiting easiness over the past few weeks include chemicals (both organic and inorganic), synthetic fibers, paper, and plastic resins, where some announced price increases failed to hold up.

Offsetting all of these weaknesses was a pickup in construction materials. The advance here was led by millwork, softwood lumber, and logs and timber. Other areas also firming were fabricated metal products, asphalt roofing, and environmental controls—all reflecting in large part the recent pickup in building activity.

This month's breakdown

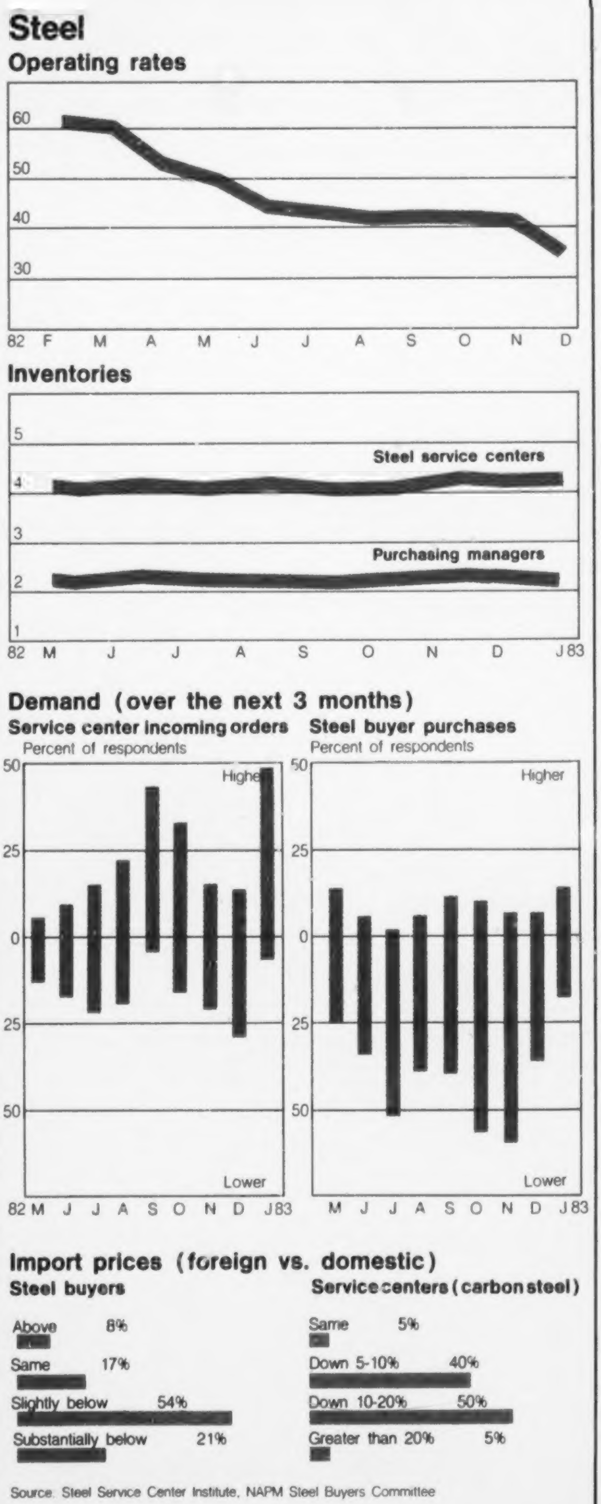
	Latest level (Dec.)	% change from: Month ago	Year ago
Bearings	335.3	0.9	4.3
Bolts, nuts, etc.	270.0	-0.1	1.0
Chemicals, inorganic	304.7	-1.1	1.0
Chemicals, organic	360.8	-0.7	-8.2
Concrete products	298.5	0.1	1.7
Cutting tools, small	276.7	0.0	3.0
Electrical instruments	261.9	1.7	7.4
Electric lamps (bulbs)	297.2	0.1	8.2
Fans and blowers	336.5	0.1	2.3
Fittings, industrial	307.3	0.0	1.1
Foundry and forge products	346.1	0.0	2.2
Fuel oil (residual)	1120.0	-2.8	-5.1
Furniture, commercial	279.0	0.0	5.7
Gasoline	654.2	-1.7	-6.6
Glass, flat	225.3	0.0	4.3
Glass containers	358.5	0.0	6.9
Gypsum products	253.9	-0.4	1.7
Hand tools	342.1	-0.1	4.0
Hand tools, power driven	221.6	0.0	2.8
Industrial furnaces	356.4	0.1	4.7
Integrating and measuring instruments	216.3	0.7	5.8
Internal combustion engines	335.1	0.0	6.8
Lubricating oil	820.1	-3.1	-7.7
Lumber millwork	286.1	2.1	4.5
Material handling equipment	286.9	0.2	0.6
Metal containers	325.7	-0.4	2.8
Metal mill shapes (nonferrous)	304.5	1.1	-0.3
Metal tanks	310.9	-0.1	0.0
Motors and generators	314.1	1.1	2.8
Motor trucks	292.9	0.1	4.6
Office and store equipment	153.5	0.3	3.1
Paperboard	244.5	-1.3	-6.0
Paper boxes and shipping containers	248.5	0.0	-0.2
Paper office supplies	226.8	0.0	3.4
Paint	265.1	0.0	3.4
Plastic resins	281.4	0.0	-4.4
Precision measuring tools	241.5	0.4	3.6
Pumps and compressors	348.2	0.1	2.8
Refractories	337.7	0.0	8.5
Rubber belts and belting	328.1	1.0	6.1
Scales and balances	227.6	0.2	2.6
Steel products	343.3	-1.1	-1.2
Switchgear	261.5	0.3	0.9
Textiles, synthetic fibers	160.6	-0.9	-0.6
Textiles, gray fabrics	143.3	0.2	-2.6
Tires and tubes	256.2	0.5	0.3
Transformers and power regulators	220.3	-0.1	-0.8
Valves, industrial	330.6	0.3	1.6
Welding equipment	273.1	0.0	0.9
Wire and cable	198.1	-0.1	-3.8

Industrial prices at a glance



Source: Bureau of Labor Statistics

BUSINESS DATATRAK



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

One surprise was a general firming in capital equipment, a sector where demand has recently been quite disappointing.

Despite those gains in the equipment area, government analysts continue to insist 1983 will be a year of moderation, with the overall advance for the 12-month period not expected to go much, if anything, above 4%.

STEEL SCENE

Signs of increasing steel demand

Steel demand may finally be poised for a fair-sized pickup over the next few months. So say a growing number of buyers and service centers responding to new metal surveys.

A just-released Steel Service Center Institute (SSCI) query is perhaps the most optimistic—with nearly one out of every two respondents now anticipating an order pickup over the next three months. That's the largest number in years—and far outweighs the miniscule 7% who see further nearterm reductions ahead.

Buyers, too, seem to be lifting their steel sights—though not to the same extent. Some 13% of those responding to a new NAPM steel questionnaire now anticipate an increase in their receipts of the metal over the next quarter—double the reading suggested when a similar question was asked the previous month.

Fewer reductions

Equally significant here is the shrinkage in the number of steel buyers contemplating nearterm retrenchment. Only 20% now plan on a reduction in the tonnage they receive—virtually halving the number of such negative projections made the previous month.

But no one is expecting miracles. Andrew G. Sharkey, SSCI president, observes that any gains will be relatively modest. He feels, for example, that it may be 1984 at the earliest before shipments can reattain their 1979 peaks.

Whatever the extent of recovery, however, service centers are looking forward to taking over more of the steel-processing function as mills increasingly concentrate on basic steel making.

Worries

But despite all this, price cutting continues unabated. Observes Robert G. Welch, a former SSCI president, "There is no relationship between published prices and real prices anymore—and that has to change."

Inventories are another service center worry. The pertinent figures from the SSCI on this score: Some 44% of responding members say their stocks are still too high (versus only 2% who rate them as being too low). And the same is true on the industrial buyer front, where the comparable figures are 40% "too high" and only 3% "too low."

But there are some signs that this inventory evalua-

BUSINESS DATATRAK

tion may be changing—at least as far as buyers are concerned.

Specifically, 10% now plan on beefing up stock levels over the next six months. It's the largest number opting for an inventory increase in almost two years.

Imports
Another trend worth noting: The continuing influx of low-priced imports. The SSCI, for example, finds that half of its members are now being offered carbon steel some 10-20% under comparable domestic levels—with another 5% putting the price break at over 20%.

And the story is much the same in the stainless sector. Here, nearly three out of every five service centers report a 10-20% price advantage for the foreign product.

Extremely low import prices are also confirmed by industrial buyers. All in all, some 21% of surveyed PMs say foreign metal is substantially under domestic levels—about double the number reported just a year ago.

Not suprising, the majority of respondents feel import dependence is likely to stay close to current levels in the months ahead—though a few buyers do see some tapering off as Uncle Sam puts more and more pressure on countries that encourage the dumping of metal here at unrealistically low prices.

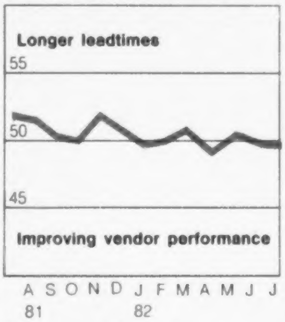
Other key trends that have been reported over the past month:

- *Steel availability:* Everything is expected to be in ample supply through spring—this despite the threat of a U.S. strike this summer.
- *General business:* Both service centers and buyers agree that the economy will be improving—with 49% of the distributors and 43% of the PMs anticipating some advance over the next 3-6 months.
- *Selling prices of buyers' finished products:* Some 21% characterize tags as "weak" vis a vis a year ago—with an even bigger 31% dubbing them "very weak."

Status report

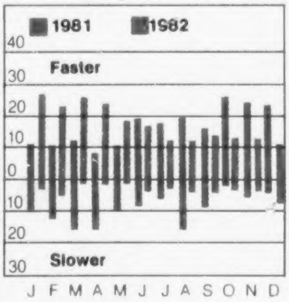
Leadtime index

A 'diffusion' index based on 158 key commodities. Above '50' indicates a tendency for leadtimes to stretch out. Below '50' suggests improving vendor performance.

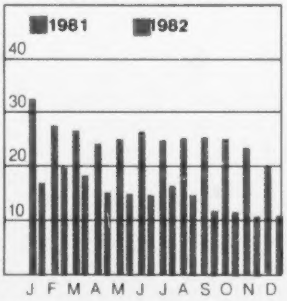


Delivery performance

Percent reporting deliveries

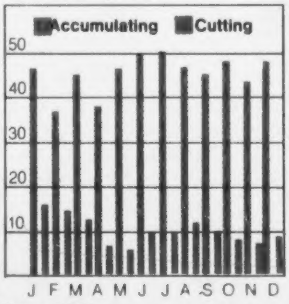


Forward commitments



Inventory strategy

Percent of respondents



Source: NAPM

PROCUREMENT STATUS

Buyers report no supply problems

Business may be ready to pick up. But you'd never know it by looking at new purchasing surveys.

Leadtimes, for example, are running from stable to slightly lower. Our exclusive ***PurchasingWorld*** index of average buyer waits still remains a point under the neutral 50 mark. And talks with buyers suggest that February and March will show similar readings.

Still other indications of a continuing "no-sweat" situation come from:

- **Faster deliveries:** PMs reporting speedier service outnumber those reporting slowdowns by a considerable margin. And that's been the case now for more than a year and a half.
- **Forward buying:** Right now only 11% of PMs surveyed say they're committing for production materials 90 days or more in advance compared to the 20% reading of just one year ago.
- **Inventory strategy:** "Keep 'em lean" is still the order of the day. Specifically, 47% say they're currently paring stocks—far above the small 8% who are now laying in a bit extra.

Nor do buyers seem unduly concerned about any sudden change in the procurement climate. As one durable goods purchasing executive explains it: "Given today's under-70% operating rates and forecasts calling for little more than slow, gradual recovery—I see no reason why current easy markets shouldn't continue for sometime—maybe even into early summer."

Leadtimes and availability

Chicago: Corrugated leads in some cases are down as low as 2-3 days. Ditto, for surfactants. PVC is available in only 3-5 days. But some extensions in lumber—to 3 weeks and 2-3 weeks for softwood framing and softwood plywood, respectively. No change in either c-r steel sheets (4-5) and h-r sheets (2-3).

Cleveland: Some modest extensions (in weeks) to these levels: polyethylene and PVC (2-3), cold-finished aluminum (6-8). Unchanged are corrugated (3), folding boxes (4), reconditioned steel drums (1-2), lumber and plywood (3), strapping (2-3), alloying materials (on demand), and maintenance paint (1-2).

Los Angeles: Somewhat reduced waits (in weeks) for large valves (13-26), heavy-duty cable (26), heavy-duty fasteners (13-17), filler clay (1½), custom seals and gaskets (4-6), and galvanized steel (4). But out a bit are heavy duty steel (10-12), gray iron castings (8-10), brass castings (8-10), and insulation materials (10-12).

BUSINESS DATATRAK

Houston: These leads for two newly monitored items: steam turbines (12-16 months) and turbo generators (13-16 months). Other typical waits (in weeks): packaging (2-4), heat exchangers (26-39), electronic parts (4-6), MRO items (2-4), tungsten carbide parts (14-16), shop-fabricated carbon pipe (17-33), and mill steel (4-8).

Philadelphia: Some speedup in steel to these new weekly levels: standard stainless rod (3-4), specially sized stainless rod (12), standard stainless pipe (6), specially sized stainless pipe (12). Fasteners, bearings, and valves remain unchanged. Ditto corrugated (2-3), computer paper (4-7), and paper snap sets (3-6).

Pittsburgh: Multiwall paper is in (to 4-5 weeks). Big shrinkages in waits for drums—to 1 week for paper-ply, standard steel, and nonstandard steel types—with the last off sharply from the old 10-12 range. Unchanged are most alloying materials (2), plastic resins (4), paint (3), and steel strapping (2-3).

Leadtimes (in weeks)

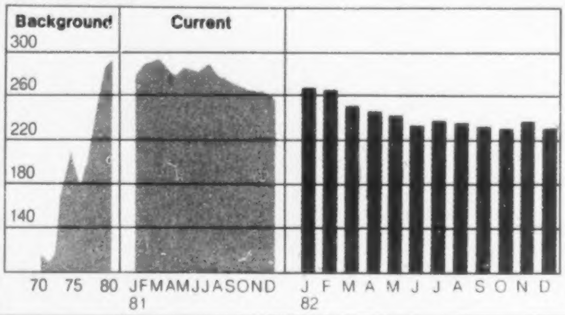
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	5	5	5
C-R Sheet (Chgo)	4½	4½	4½
Plate (Phil)	4½	4½	4½
Plate (Chgo)	2	2	2
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5	5	5
H-R Bars (Chgo)	2	2	2
Cold-Drawn Bars (Phil)	6	6	12
Galvanized (LA)	4	5½	3½
Galvanized (Chgo)	4½	4½	4½
Structurals (Chgo)	2	2	2
Structurals (Hous)	17	17	17
Tubing (Phil)	19	19	19
Grey Iron Castings (LA)	9	7	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	7	7	7
Pipe, Carbon (Hous)	26	26	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	9	9	9
ICs (Linear) (Phil)	12	12	16
Motors (Phil)	21	21	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	7	7	7
Relays (Chgo)	15	15	15
Resistors (Chgo)	10	10	10
Resistors, Wirebound (Phil)	10	10	18
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	1½	1½	1½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	1/5	1/5	1/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	1	1	2
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	5	3½
Paint, Coil Coating (Pgh)	3	3	3
Paint, Maint. (Clev)	1½	1½	1½
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	½2	2	2
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	½	½	1
PVC Resin (Pgh)	4	4	4
Titanium Dioxide (LA)	1	1	1½
PACKAGING			
Bags, Kraft (Pgh)	4	4	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	7	7	11
Cartons, Corrugated (Clev)	3	3	3
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	4½	4½	7
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	5	5	5
Shrink Film (Clev)	3	3	3
Drums, Fiber (Pgh)	1	3½	3½
Drums, Steel, Std. (Pgh)	1	2½	2½
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	6½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	7½	7½	7½
Aluminum Plate (Chgo)	7	7	7
Aluminum Sheet (LA)	5½	5½	7
Aluminum Sheet (Chgo)	8	8	8
Brass Castings (LA)	9	7	7
Brass Rods (Chgo)	2½	2½	2½
Brass Sheet (Chgo)	5	5	5
Brass Tube (Chgo)	9	9	9
Copper Fittings (LA)	4	4	3
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	4	4	6
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	4
Wire, Specialty (LA)	4½	4½	6
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	22	22	22
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	56	56	60
Compressors, Reciproc. (Hous)	45	45	45
Fasteners (Chgo)	½	½	½
Fasteners (LA)	5	5	10
Fasteners, Std. (Phil)	3½	3½	3½
Heat Exchangers, Carbon-alloy Steel (Hous)	30	30	32
Heat Exchangers, Hi-pressure (Hous)	43	43	37
Insulation Mat'l. (LA)	11	4	4
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1	1	1
Pumps (Hous)	41	41	41
Pumps (LA)	10	10	10
Rubber, Synthetic (LA)	1½	1½	1½
Rubber Hose (LA)	6	6	5
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	13	13	13
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Index: 1967 = 100

Latest month	**227.4**
Month before	**230.4**
Year ago	**264.2**



Latest spot market prices

FERROUS METALS	Latest price	Previous month	Year ago
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	347.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	22.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	22.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	22.15
Steel, bars, dlvd. Phila., cwt., merchant quality	17.50	14.35	14.35
Steel, bars, Pitts, cwt.	17.50	14.35	14.35
Steel, bars, C.R., Pitts, cwt.	31.00	31.00	29.00
Steel, plates, Pitts., cwt.	24.25	24.25	24.25
Steel, plates, H.R., Pitts., cwt.	20.80	20.80	20.80
Steel, sheets, C.R., Detroit, cwt.	24.65	24.65	24.65
Steel, strip, C.R., Chi., cwt.	29.05	29.05	29.05
Steel, basic wire, Pitts., cwt.	23.65	23.65	25.95

NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.47	0.46	0.51
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	4.95	4.95	4.60
Brass, red, 85%, [sheet], lb.	1.24	1.19	1.22
Brass, yellow, [sheet], lb.	1.18	1.13	1.16
Cadmium, ton lots, lb.	1.00	1.00	1.40
Copper, electrolytic, wire bars, refd., lb.	0.77	0.72	0.80
Copper sheet, over 24 in., lb.	1.35	1.28	1.31
Lead, common, N.Y., lb.	0.205	0.205	0.300
Magnesium, pig ingot, [99.8%], lb.	1.34	1.34	1.34
Mercury, 20 fl. lots, N.Y., fl.	380.00	378.00	418.00
Molybdenum Climax Oxide/bags, lb.	4.40	4.40	8.50
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	12.00	10.35	8.32
Tin, Straights, N.Y., lb.	6.21	6.13	7.84
Zinc, Prime West, East St. Louis, lb.	0.38	0.38	0.42
Zinc, die casting alloy, No. 3, lb.	0.465	0.465	0.505

PAPER			
Bond paper, No. 1 sulfite, water marked, 20-lb., 4 cartons, cwt.	68.60	68.60	68.60
Gummed sealing tape, carton	15.70	15.70	15.70
Offset paper, No. 1 Grade	49.70	49.70	45.50
Folding boxboard, white clay coated 80 bright, ton	372.90	374.55	411.67
Wrapping paper, std. distribution cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	250.00	250.00	300.00

TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.229	0.243	0.235
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	0.95	0.95	1.00
Cotton middling, 1", N.Y., lb.	0.616	0.615	0.580
Printcloth, 48", 80x80, N.Y., spot. yd.	0.61	0.61	0.71
Army duck, 37", 13 oz., yd.	1.00	1.00	1.80
Blended printcloth, 64", 78x54, yd.	0.65	0.65	0.72
20s combed yarns	1.70	1.70	1.73
Wool tops, N.Y., lb.	3.60	3.60	3.60

CHEMICALS	Latest price	Previous month	Year ago
Acrylonitrile, tanks, lb.	0.430	0.460	0.435
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	210.00	210.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.42	1.48	1.50
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.66	0.66	0.66
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	0.101	0.101	0.101
Glycerine, synthetic, tanks, lb.	0.725	0.725	0.805
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.725	0.725	0.805
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.31	0.31	0.42
Polyethylene resin, low density liner film grade (market price), lb.	0.275	0.270	0.260
Polypropylene, homopolymer grade (market price), lb.	0.37	0.37	0.36
Polystyrene, general purpose grade (market price) lb.	0.38	0.38	0.38
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.350	0.335	0.375
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	135.00	135.00	147.50
Sulphuric acid, 66%, commercial, tanks, ton	56.85	56.85	93.69
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.45	1.45	1.48

BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	300.60	292.45	316.11
Lumber 2x2, pine, mbf, cl	288.80	277.50	294.17
Plywood, plyform, 3/4", msf, cl	557.35	551.80	582.95
Plywood, 5/8", msf, cl	340.25	324.25	339.50
Cement, bulk, ton, tl	62.02	62.02	60.98
Sand, ton, cl	5.89	5.88	5.99
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	46.17	45.68	45.10
Crushed stone, 1½", ton, cl	7.81	7.77	7.81
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.75	0.76	0.69
Gypsum sheathing, ½"x1"x8", msf, tl	159.04	156.82	153.43
Brick, common, per thousand, tl	173.00	172.85	169.55
Asphalt paving, AC-20	156.77	156.77	167.45
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.63	6.61	6.70

FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	22.75	23.25	22.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	30.50	31.50	33.30
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.810	0.845	0.955
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.857	0.894	0.983
Heating oil, No. 2, Chi., bulk, gal.	0.863	0.870	0.983
Heating oil, No. 2, N.Y., bulk, gal.	0.858	0.940	1.006
Heavy fuel, PS 400, Los Angeles, rack, bbl.	25.05	26.15	24.50
Jet kerosene, gal.	0.860	0.870	0.935
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.475	0.530	0.440

SCRAP MATERIALS			
Steel. No. 1, hvy., dlvd., Pitts., ton	54.00	51.00	93.00
Steel, No. 1, hvy., dlvd., Chi., ton	54.00	44.00	82.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.595	0.565	0.650
Copper, No. 2, East, wholesale buy, dlvd., lb.	0.530	0.505	0.650
Brass, red, East, wholesale buy, dlvd., lb.	0.555	0.525	0.610
Brass, yellow, East, wholesale buy, dlvd., lb.	0.315	0.330	0.350
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	0.230	0.220	0.255
Alum., mixed clip., E., wholesale buy, dlvd., lb.	0.240	0.230	0.275
Zinc, old, East, wholesale buy, dlvd., lb.	0.075	0.080	0.150
Lead, clean solids, East, wholesale buy, dlvd., lb.	0.10	0.11	0.18
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	5.00	5.00	10.00
Paper, old corrug. box, dlr., N.Y., ton	4.00	4.00	7.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.10	0.13	0.09
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.11	0.12	0.16

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

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Vendor analysis: basic tool in negotiations

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Vol. 27, No. 3 - March 1983

Helping you manage the business of buying

6 **Publisher's Memo**

11 ***PW* Predicts**
Optimistic inflation outlook

19 **Datatrak**
Key economic trends 17
Current prices 19
Steel scene 22
Procurement status 24
Leadtimes 26
Spot market prices 28

32 **Vendor analysis packs a punch in negotiation**
Here's how buyers can use performance measures as a cost-saving tool in dealing with suppliers.

38 **PMs getting more and bigger discounts**
Nationwide ***PurchasingWorld*** survey of packaging buyers suggests that industrial purchasing execs are now getting about 7% off list levels.

42 **Techniques for buying inbound transportation—and when to use them**
Companies must balance purchase price, terms, stocking considerations, leadtimes, safety stocks, and stockout implications. These factors create an "availability profile" which will help purchasers determine which shipping method will do the right job for the right cost.

49 **Intense competition means lower prices for office equipment**
Heavy downward pressure on business systems equipment prices—the result of new products and intense competition—means excellent cost savings for buyers.

51 **Take the initiative**
You can—and should—build closer ties with your top management, suppliers, and others, says this purchasing vp and corporate director at The Wm. Wrigley Jr. Co.

55 ***PW* TechFile: Stainless steels**
There are some 60 standard grades and an increasing number of specialized, proprietary stainless steels available in today's marketplace. Here's a guide to understanding the basics.

70 **Purchasing Law**
Solving disputes with suppliers

73 **Products**

74 **Value Analysis**
Knowledge: A critical need

80 **Negotiations**
Aim for quality, delivery gains

84 ***PW* Perspective**

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PW PREDICTS

Robert S. Reichard, executive editor

Optimistic inflation outlook

Another good year on the inflation front now seems all but assured.

One reason: The projected overall demand increase (most likely something in the order of 2½-3%) is not nearly enough to push factory operating rates (a time-tested yardstick of demand-pull pressures and bargaining leverage) much above the low 1970s level.

Equally encouraging is the continuing progress on the cost-push front. First-year pay hikes in major contracts over the past 12 months, for example, averaged out at only 3.8%—virtually halving the comparable 7.9% figure of 1981. True, this average includes some hard-hit industries, like autos and trucking, where wage hikes all but disappeared. But even in the more viable wage-boosting sectors the increase comes to only about 7%.

Other good news in recent weeks comes from (1) rising productivity (up 2.7% at annual rate over the latest quarter) and (2) a further weakening in oil prices. Thus, Washington's projections for only a 5.2% increase in this year's GNP deflator (down from 6% in 1982), begins to look increasingly realistic.

Consumer prices will also fare well this year. Energy advances (except for natural gas) will be relatively restrained. So will auto and other big-ticket consumer product boosts. Lower mortgage rates are also bound to help. Ditto food costs, which are now expected to advance only about 3-6%—just about in line with last year's 4½% average increase.

Again Uncle Sam's projections seem pretty much on the nose—with the average 1983 cost-of-living advance put at 4.9%—more than a full percentage point under last year's 6% increase.

About the only area likely to see some acceleration this year is industrial raw materials. There are already signs of upward movement here—particularly in key nonferrous metals, such as copper and aluminum ingot. Moreover, other sectors—such as steel, plastic resins, and building materials—are also likely to sport bigger-than-1982 increases as the year wears on. But that's only to be expected for these demand-sensitive products. More important, many basic raw material producers are still in the red. So it would be unrealistic to expect a repeat of 1982's bargain-basement levels.

Even so, end-of-1983 basic materials tags will, in almost all cases, still be well under levels prevailing in 1980 and 1981.

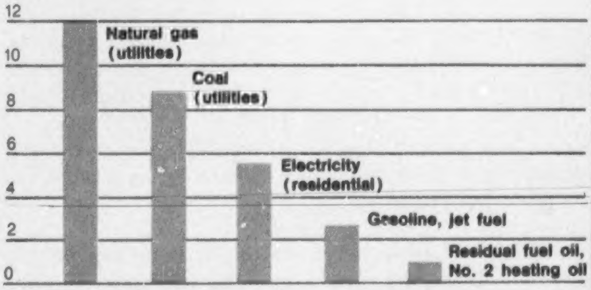
Steel

Orders are picking up a bit—though the industry is still struggling to go over 50% of its production potential. All in all, shipments should rise to near 14 million tons in the first quarter—up about 1½ million from the previous three months. Prices, meantime, continue to be heavily discounted—with the average deal knocking about 6-7% off list.

On the other hand, some signs of firming are appearing. Thus, Peter Marcus of Paine Webber feels the world spot price could rise as much as 17% over

Energy

Energy price trends
(4Q 1982 to 4Q 1983)



Source: Department of Energy

Energy costs look to be taking a breather this year—except for natural gas and coal.

New Department of Energy estimated increases (fourth quarter 1983 vs. 1982)—assuming average crude oil tags remain at last year's levels—are as follows: No. 2 heating oil and residual fuel oil (1%), gasoline and jet fuel (2½%), residential electricity (5½%), utility coal (8½%), and utility natural gas (12%).

But these increases (detailed in the chart) are probably overestimated—given current OPEC pricing problems. Assume, for example, an average $28/barrel OPEC quote for 1983, and some declines are actually possible—with heating and residual oils under this latter scenario likely to drop 5% or more over the current 12-month period.

The impact on electricity would, of course, be less—because other energy inputs, aside from oil, are used. But even here, some deceleration would be in order—with the increase being downgraded from 5½% (under the no-oil-price-change assumption) to only around 3%.

PW PREDICTS

Copper

CURRENT SITUATION: The industry is beginning to come out of its deep hole. Aided by somewhat better demand from the auto and construction industries, **prices are slowly edging up to breakeven points.** Aiding the trend along are (1) recent U.S. and Canadian production cutbacks, (2) global inventories not all that much out of line with consumption patterns, (3) expectations of continued Chinese buying, and (4) some speculative activity by investors, who now feel copper is undervalued.

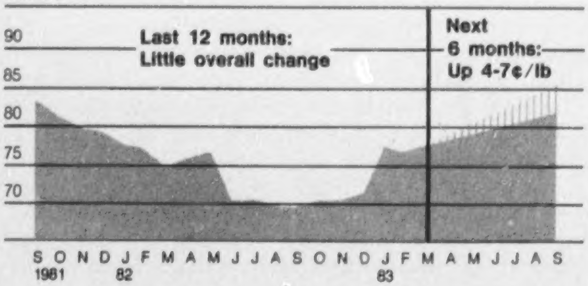
DEMAND: Modest buying gains are seen over the next few months—prodded by low user inventories and some hedging against a possible domestic mine strike this summer. Business recovery should sustain the forward momentum in the second half—**and push overall 1983 U.S. consumption into the 2-million-ton-plus range**—up 6-7% from 1982 lows, but still under the 2.4 million 1979 level. That previous peak, incidentally, won't be reattained until 1986 or 1987—as growth is held down by relatively small GNP advances and market losses to fiber optics.

SUPPLY: There's still plenty of unused capacity in the U.S., where operating rates have dropped to near the 60% level. True, some of the high-cost facilities closed last year may never reopen. But there's ample opportunity to step up U.S. output. Upshot: **Barring unforeseen dislocations, there should be enough to go around for another 2-3 years.**

PRICE OUTLOOK: Recent firming from the low, 60¢/lb levels of late 1982 should continue nearterm. But increases will be modest—given the current overcapacity situation. Best bet: **movement to near 85¢/lb by sometime this summer.** Beyond that, it all depends on how fast global demand recovers. But the longterm trend will have to be up. At least an 85-90¢/lb price is needed for U.S firms to break even, and a lot more than that would be required to justify new greenfield expansions.

Copper

Cents/lb



the next few months. Also worth noting: the newly posted 6% boost on domestic flat-rolled products. If nothing else, it means prices will be negotiated from a higher base.

Molybdenum

The alloying metal continues to take its lumps—with the industry operating at only 30-40% of its production potential in order to put a dent in top-heavy inventories (estimated at more than a year's supply).

Not surprisingly, prices continue exceptionally soft—with dealer oxide available for under $3/lb.

Nor is any big demand pickup anticipated. To be sure, world chewup this year could rise into the 160-165 million-lb range (versus about 144 million in 1982). But that would still leave totals under 1980 levels—all at a time when global production potential has been increasing.

Rubber

Prices remain at bargain-basement levels. The natural material, for example, now goes only in the mid-40s range—a far cry from the 80¢/lb peak of a few years back.

And the situation is much the same in synthetics where the oil-extended tire grade of SBR sell for as low as 39-40¢/lb—far under the official mid-50s level. Behind the easiness, which is likely to continue through 1983: production overcapacity, smaller tires, and longer-lasting tires.

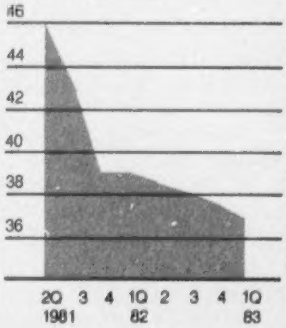
Polystyrene

Depressed prices are likely to persist for at least another few months. Sign of the times: The general purpose resin now sells for as low as 36¢/lb—far under the 45¢/lb-and-higher list levels.

Soft feedstock prices are adding to the downward pressure. Ditto, overcapacity, with the industry now operating pretty much near half of its capacity potential (estimated at near 6 billion lb per year). More important, this glutted situation is not expected to improve all that much, as 1983 demand edges up only about 4-5%.

Polystyrene

(general purpose) ¢/lb



Steel flanges

Imports are taking their toll. Incoming tonnages of carbon steel types, for example, now account for over 50% of total U.S. shipments—up from only 36% as recently as 1978.

And even though domestic firms have dropped prices as much as 25%, import quotes remain even lower. One source, for example, puts imported flanges under 14" in diameter at only 55¢/lb—far under the 89¢/lb U.S. producer list.

Not surprisingly, the domestic industry is pressing for protection. But any action here still seems a way off. Implication: Bargains will continue.

Chlor-alkalis

The recent attempt to boost off-list chlorine prices by $10/ton (into the $100-125/ton range) seems to be in trouble. But look for another price-boosting attempt later this spring.

Alkalis are also on the shaky side. Soda ash lists have dropped down to $84/ton—off $8/ton in less than a year, as the industry operates at under 75% of its potential. A similar easiness is noted in caustic soda where selling prices are now down as much as $100/ton under yearago levels.

Zinc

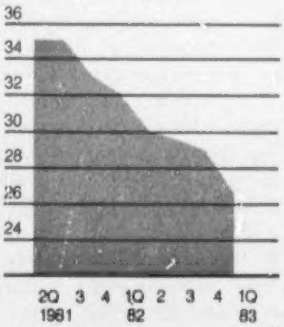
Modest discounting still persists as U.S. primary stocks continue to edge higher. But prices could well start moving up by late spring or summer if the auto and construction pickups continue. For the year as a whole, U.S. consumption could be up about 6%—a fair amount, but not nearly enough to recoup last year's steep 20% drop.

Longterm growth also looks to be slow—probably only 2-3% a year. But buyers continue concerned about longterm supply; plant closedowns have reduced U.S. potential to only 300,000 tons per year—a far cry from the million-ton total of just a decade earlier.

Phthalic anhydride

Prices continue to slip—with the molten grade dropping down into the low 26½¢/lb range—some 3½¢/lb under early January quotes and far under previously posted 40¢/lb-and-higher list levels.

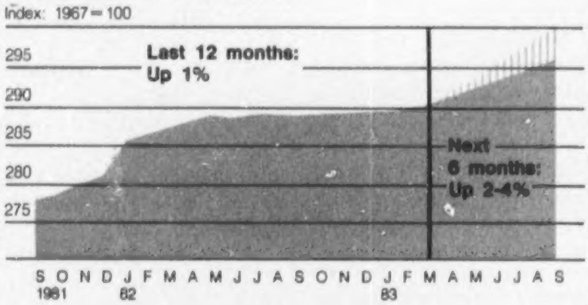
Behind the easiness: overcapacity. Indeed, even with two firms (Chevron and Allied Chemical) dropping out, other producers are being hard-pressed to maintain even 50% operating rates. Nor is any major turnaround likely—with 1983 consumption not expected to move much above last year's 750-million-lb figure.


Phthalic anhydride
(molten grade) ¢/lb

Petrochemicals

Much of an early 1983 price increase in ethylene has washed out. The going transaction quote is now just over 20¢/lb—close to

Paper


Paper and allied products

CURRENT SITUATION: Little first quarter improvement is noted over recession-plagued 1982 when operating rates fell to the mid-80s range. Prices also remain depressed—with overall industry averages showing virtually no gain. And even that doesn't tell the whole story. Key products such as linerboard, for example, are available for as much as $50/ton under list. Newsprint goes for as low as $400/ton. **The situation is similar in many converted products.** Hefty discounts are fairly common in corrugated, folding cartons, and paper bags and sacks.

DEMAND: Some modest pickup is likely by spring. And if real GNP advances the expected 2½-3% this year, production could rise 3-3½%—**reflecting higher consumption, some modest rebuilding of depleted inventories, and slowly rising exports.** Some of the specific gains anticipated for 1983: corrugated boxes (3-4%), folding paperboard boxes (1½-2%), bags (2%), and coated and glazed products (4-5%). The longterm growth rate for the industry as a whole is put at slightly under 3%.

SUPPLY: Sluggish demand growth—combined with continuing additions to capacity—tells the story. On the capacity front, for example, a new paper industry survey puts average gains at 1.7% over the next few years (1.3% for paperboard and printing and 3.3% for printing and writing papers). These are not much under projected demand gains. Thus, **it may take another year or two for the industry to reach a 90% operating rate.**

PRICE OUTLOOK: More-than-ample supplies suggest prices will continue to be negotiable. But discounts should slowly dry up. It may be midyear or later before significant boosts in list levels can be posted—particularly in such areas as linerboard. Only about a 2-4% overall paper and allied product increase by September is suggested. And for 1983 as a whole, ***PW* equations indicate that averages are not likely to run more than 4-5% ahead of 1982 levels.**

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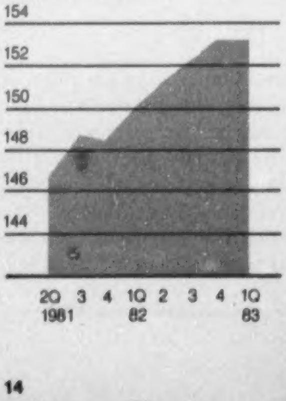
2¢/lb under the official posted level. There's plenty of discounting in ethylene oxide, too—where a 3¢/lb decline has brought prices down to 32¢/lb.

Benzene has also been feeling some downward pressure of late—with recent sales going for only $1.45/gallon. But this should begin to firm up a bit before too long as supplies tighten because of dwindling imports.

Office equipment

Competition is calling the tune—despite continuing good demand. Signs of the time: (1) Xerox has cut tags on some duplicating equipment by 21%, (2) new, cheaper, personal computer models continue to hit the market, and (3) a discount personal computer market has developed with some resellers peddling machines for as much as 20% under authorized dealer prices. The rush is also on to introduce new portables. All in all, the government's official office equipment index is now running only 3% ahead of a year ago—with the same or even a smaller overall boost anticipated over the current year.

Office equipment
Index: 1967 = 100



Aluminum

Mixed price trends here. While merchant ingot is beginning to edge up (it's now well into the 50s range—versus the mid-40s low of last year), common alloy products remain extremely competitive. Indeed, at last report, discounts here had widened to quintuple 5%—plus an additional 3%.

All in all, however, some faint signs of an order pickup are apparent. And the industry is now talking about an 8% increase in primary shipments for 1983—up to 6.7 million tons. Coupled with relatively low production (current operating rates are near 56%), this should help trim top-heavy producer stocks and permit ingot to edge up a bit more—perhaps to near 60¢/lb by summer or early fall.

Lead

Prices are still mired in the just-over-20¢/lb range. And there's little sign of any nearterm change—not with the low LME quotes, still-rising producer stocks, and a relatively mild winter that has hurt purchases of lead-containing replacement batteries.

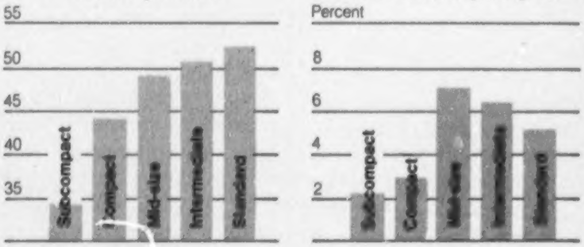
True, possible strikes in those big North American plants could give prices an upward jog. But even then, world capacity seems more than ample to take up the slack. As for overall 1983 domestic demand, little more than a 2% advance is seen—not even close to recouping last year's 7½% decline.

Upshot: Prices by year-end may find it hard breaking even the low 25¢/lb barrier.

Crude oil and inflation

A sharp drop in OPEC oil tags could have a major impact on the overall price level. Data Resources, Inc. (DRI), for example, figures that a $5/barrel reduction could trim the cost-of-living index by a full percentage point. Other fallouts: (1) A 0.8% increase in real growth, (2) an average $25/year saving in the typical household energy bill, and (3) a reduction in the nation's annual oil import bill—perhaps as much as $9 billion a year. *PW*

Car costs


What it costs to drive a car

Cents per mile

Increase over past year

Source: Hertz

Good news for auto fleet managers. Car ownership and operating increases decelerated sharply last year—and the overall tab may even decline a bit in 1983.

So say Hertz analysts who have been tabulating these outlays for decades. Zeroing in on 1983, a spokesman for the big lease-rental outfit observes, "with both gasoline and interest rates dropping, and new cars up only slightly, the year could well see a drop."

Some of Hertz's more detailed 1982 findings for new models (based on driving 10,000 miles a year and keeping the car 5 years):

- Average 1982 cost-per-mile increases varied from a low of 2.1% in the case of subcompacts to 6.8% for mid-sized cars.
- The level of cost also varies significantly—ranging from 34.2¢/mile for a subcompact to 52.3¢/mile for a standard size vehicle (see chart).
- Costs drop considerably if you keep the car longer. Thus, a compact kept for 10 years will cost only 33.8¢/mile—well under the 44.7¢ for one held only 5 years.
- Driving the car more miles also helps. Increase mileage to 15,000 miles per year (holding ownership constant at 5 years), and costs for a compact drop from 44.7¢/mile to only 34.1¢/mile.

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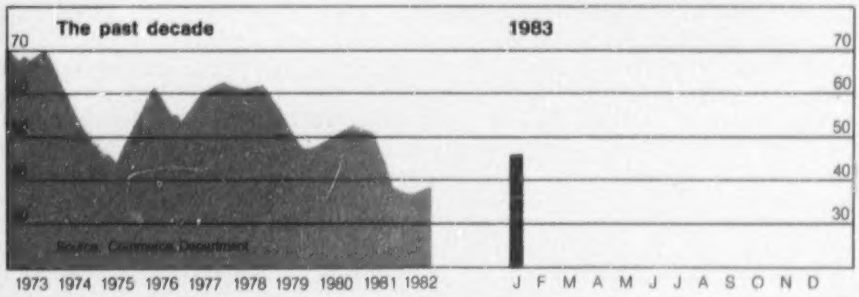
BUSINESS DATATRAK

NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Department

KEY ECONOMIC TRENDS

Leading indicators show signs of recovery

The long-awaited economic recovery may already be underway.

Lest there be any doubt on this score, take a look at the NAPM Business Barometer (chart above). This key yardstick of future activity has moved higher for two straight months—with the latest advance (to 45.7) bringing the index to within shooting distance of 50 (the cutoff point between overall decline and overall pickup).

More important, one key component of the NAPM indicator—production—has actually shifted back into the plus column. Specifically, for the first time in a year and a half there are more members reporting output increases than decreases. Implication: Industrial output is finally beginning to turn around.

Federal index

The same picture is suggested by Uncle Sam's index of leading indicators which has just taken a fairly significant upward jump (the largest, in fact, in over three years). Also worth noting: The normally conservative Congressional Budget Office is now taking a somewhat rosier view of the economy—forecasting a 2.1% increase in real GNP this year, and an even more substantial 4.7% advance for the following year (1984).

Specific leaders

Zero in on some of the specific sectors of the economy, and the same improving business trend becomes apparent. Construction awards (a time-tested indicator of building activity some 2-3 months ahead) has moved up for three consecutive months (see chart). Indeed, the value of contracts is now at the highest level in three years.

Manufacturers' incoming orders in the crucial durable goods sector also look more robust. To be sure, the overall level is still quite low relative to a few years back (see chart). But the improvement—led by defense industries—has advanced by more than 10% from extremely depressed fall 1982 levels.

Some questions

In short, there are still a few question marks.

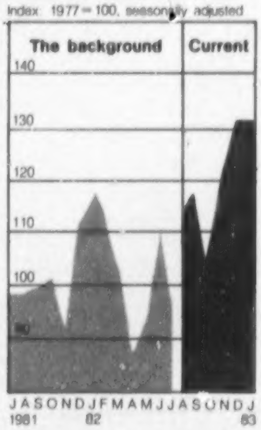
Progress on paring the budget deficit will bear close monitoring, too. Most economists, for example, feel some sharp reductions will be necessary to prevent a re-escalation in interest rates—something which could well abort the current pickup.

Unemployment is also likely to remain a nagging problem during the initial stages of the current upturn. Any meaningful nearterm improvement, for

Leading indicators

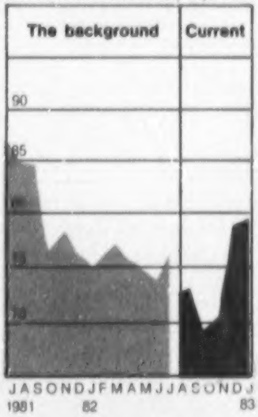
1. Construction awards

Index: 1977 = 100, seasonally adjusted



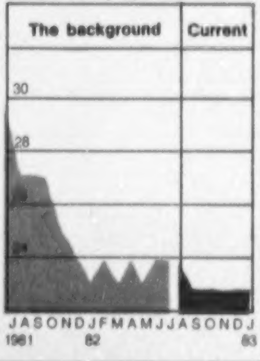
2. Durable new orders

Billions of dollars, seasonally adjusted



3. Overtime hours

Hours, seasonally adjusted



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example, seems unlikely in view of a still relatively low overtime-hours figure (refer to chart). The point to keep in mind here: Traditionally manufacturers tend to boost hours of existing employees before taking on new workers. And the same can be expected this time around—at least until factory managers become convinced of a sustained recovery.

Upshot: Even with recovery, it would be unrealistic to expect any near-term decline in the jobless rate from current double-digit 10% levels—at least not for another 3-6 months.

Inventories still need adjustment

Inventories will continue to bear close watching.

To be sure, industrial buyers have been making substantial progress in cutting back on their overall stock levels. But because business activity fell even faster through most of last year, key inventory-sales ratios still remain well above their historical norms.

This is particularly true in the key durable goods purchased materials sector where despite a 6% decline in real holdings since early 1982, days' supply has continued to creep up.

Continued paring

The implication is clear. Despite a first quarter pickup in industrial output, overall inventories will remain more than adequate. Indeed, the feeling is that current stock paring (albeit at a lower rate) could well continue for another month or two.

Most purchasing executives would seem to agree with this assessment. While buyers in early 1983 reported a pickup in factory activity, they are continuing to reduce stocks—with parers outnumbering accumulators by a close 4:1 margin (see section on procurement status).

Best bet: Little more than a 3-4% second-half increase in purchased material inventories—with overall totals remaining significantly under the highs of early 1981.

Operating rates will be slow to recover

It's going to take a heck of a long time to bring today's sagging operating rates up to anything even remotely resembling normal levels.

Right now, for example, the typical U.S. factory utilization rate remains near the 70% level. And if you look at some of the key raw material sectors—notably metals and chemicals—the figures are even lower than that (see chart).

Reasons

In any event, the prognosis for an ample or more-than-ample supply situation is based on some pretty conclusive evidence:

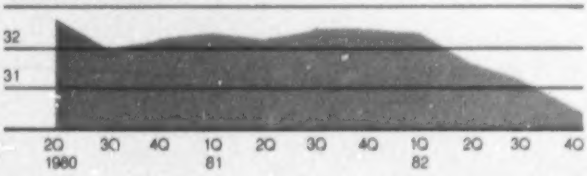
- Industrial production, even if all goes according to plan, is not likely to rise by more than 5-7% from now through the end of the year.
- At the same time, new capacity will continue to come on stream. Thus, even with current capital spending retrenchment, the nation's overall production potential will be rising by at least another 2% this year.
- Superimpose these demand and supply estimates on the existing 70% operating rate, and you'll see why it's doubtful that factory utilization averages will reach even the 75% level by yearend.

Implications

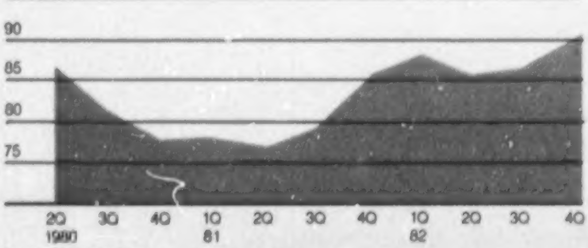
All this, in turn, has major implications for both capital equipment demand and prices. As for the for-

Inventories: Two views
(Durable purchased materials in "real" terms)

Tonnage totals
Billions of 1972 dollars

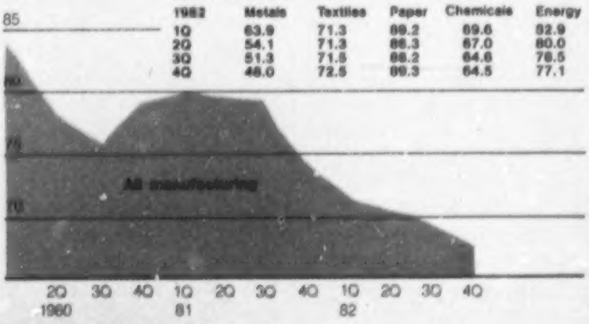


Stock-sales ratio
Percent



Source: Commerce Dept.

Factory operating rates
Percent of capacity



Key material sectors

1982	Metals	Textiles	Paper	Chemicals	Energy
1Q	63.9	71.3	89.2	69.6	82.9
2Q	54.1	71.3	86.3	67.0	80.0
3Q	51.3	71.5	88.2	64.6	78.5
4Q	48.0	72.5	89.3	64.5	77.1

Source: Federal Reserve Board, *PW* estimates

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mer—today's capacity glut would seem to rule out any meaningful pickup in plant and equipment ordering activity this year.

And on the price front, continued low operating rates would seem to guarantee continued bargaining leverage in most procurement areas. It may not be until mid-1984 that utilization rates rise above the 40% level that traditionally has been the dividing line between a buyers' and sellers' market.

CURRENT PRICES

Energy leads prices down

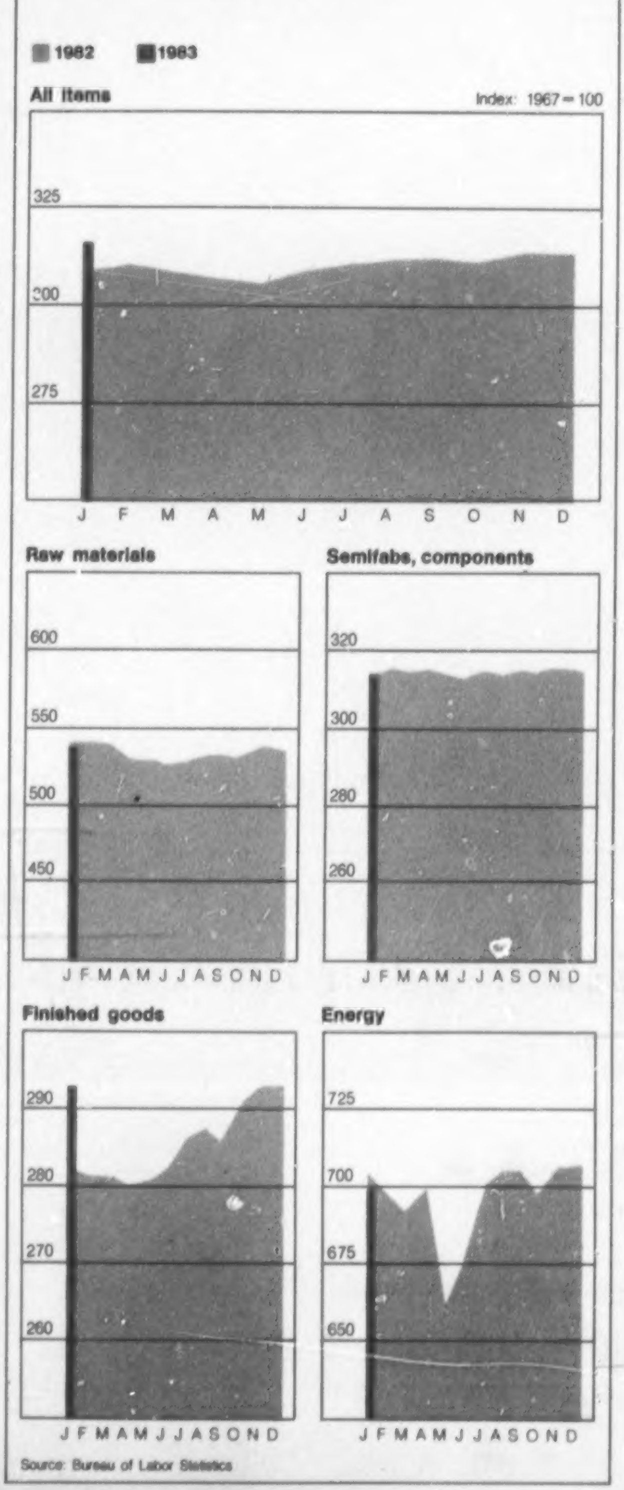
Chalk up another good month for industrial prices.

Overall averages, for example, have actually continued to decline in recent weeks—despite the first

This month's breakdown

	Latest level (Dec.)	% change from: Month ago	Year ago
Bearings	335.3	0.0	4.3
Bolts, nuts, etc.	270.0	-0.1	1.0
Chemicals, inorganic	304.7	-1.1	1.0
Chemicals, organic	360.8	-0.7	-8.2
Concrete products	298.5	0.1	1.7
Cutting tools, small	276.7	0.0	3.0
Electrical instruments	261.9	1.7	7.4
Electric lamps (bulbs)	297.2	0.1	8.2
Fans and blowers	336.5	0.1	2.3
Fittings, industrial	307.3	0.0	1.1
Foundry and forge products	346.1	0.0	2.2
Fuel oil (residual)	1120.0	-2.8	-5.1
Furniture, commercial	279.0	0.0	5.7
Gasoline	654.2	-1.7	-8.6
Glass, flat	225.3	0.0	4.3
Glass containers	358.5	0.0	6.9
Gypsum products	253.9	-0.4	1.7
Hand tools	342.1	-0.1	4.0
Hand tools, power driven	221.6	0.0	2.8
Industrial furnaces	356.4	0.1	4.7
Integrating and measuring instruments	216.3	0.7	5.8
Internal combustion engines	335.1	0.0	6.8
Lubricating oil	820.1	-3.1	-7.7
Lumber millwork	286.1	2.1	4.5
Material handling equipment	286.9	0.2	0.6
Metal containers	325.7	-0.4	2.8
Metal mill shapes (nonferrous)	304.5	1.1	-0.3
Metal tanks	310.9	-0.1	0.0
Motors and generators	314.1	1.1	2.8
Motor trucks	292.9	0.1	4.6
Office and store equipment	153.5	0.3	3.1
Paperboard	244.5	-1.3	-6.0
Paper boxes and shipping containers	248.5	0.0	-0.2
Paper office supplies	226.8	0.0	3.4
Paint	265.1	0.0	3.4
Plastic resins	281.4	0.0	-4.4
Precision measuring tools	241.5	0.4	3.6
Pumps and compressors	348.2	0.1	2.8
Refractories	337.7	0.0	8.5
Rubber belts and belting	328.1	1.0	6.1
Scales and balances	227.6	0.2	2.6
Steel products	343.3	-1.1	-1.2
Switchgear	261.5	0.3	0.9
Textiles, synthetic fibers	160.6	-0.9	-0.6
Textiles, gray fabrics	143.3	0.2	-2.6
Tires and tubes	256.2	0.5	0.3
Transformers and power regulators	220.3	-0.1	-0.8
Valves, industrial	330.6	0.3	1.6
Welding equipment	273.1	0.0	0.9
Wire and cable	198.1	-0.1	-3.8

Industrial prices at a glance



Source: Bureau of Labor Statistics

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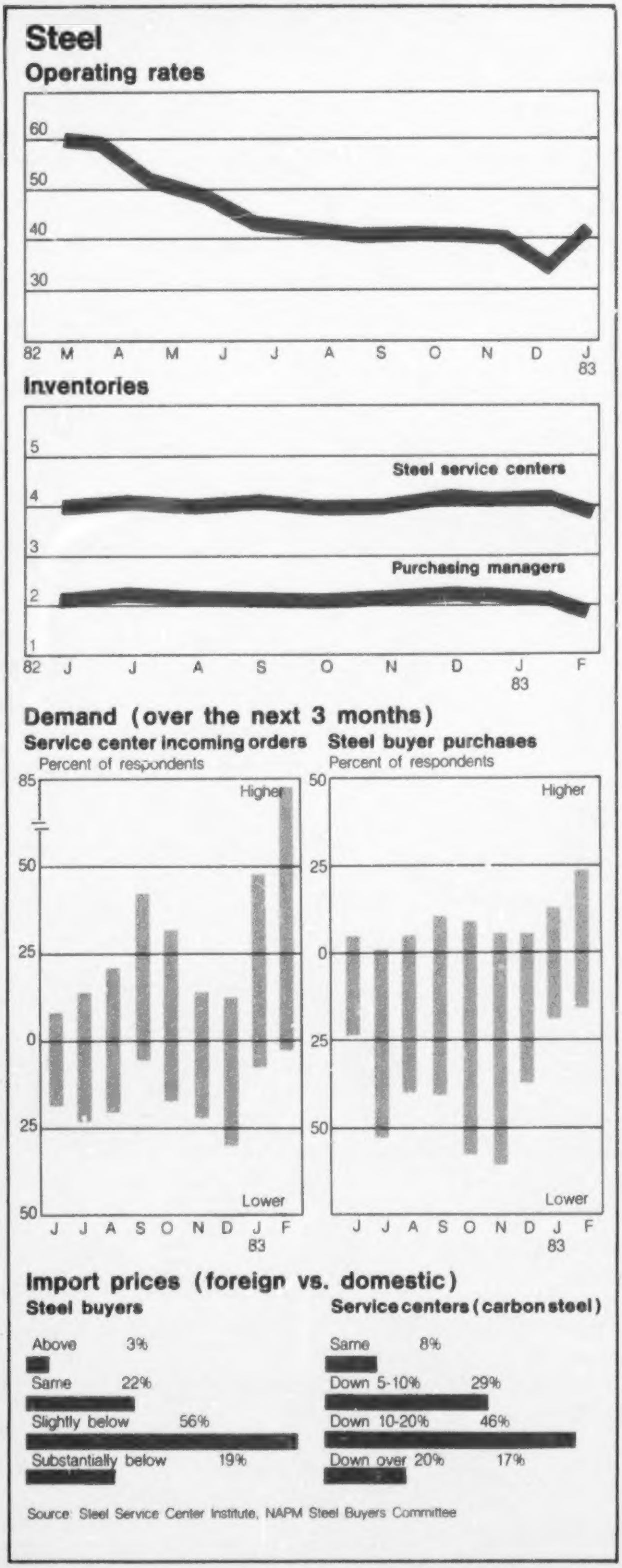
BUSINESS DATATRAK



Steel

Operating rates

Inventories

Demand (over the next 3 months)

Import prices (foreign vs. domestic)

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

signs of a general business pickup.

Equally significant, the now-versus-yearago increase has narrowed to 3%.And preliminary indications suggest that February and March readings for industrial prices will be equally encouraging.

Credit much of the easiness to sagging energy prices. Thus, all nine of the spot fuel quotes that are regularly monitored by ***Purchasing World*** moved lower this past month.

Similar price easiness prevails in many capital equipment areas—as low factory operating rates continue to hold machinery demand under 1982 levels.

Also on the soft side are many office equipment lines—especially small computers and typewriters, which are both under heavy competitive pricing pressures.

On the other hand, some of the heretofore easy crude materials are showing some signs of firming. Basic aluminum and copper quotes, for example, are now above end-of-1982 levels—and further modest firming can be expected here if the economy improves as expected.

Steel makers are also attempting to post a few increases in lists. But given current less-than-half-of-capacity operations and continued import competition, it's questionable where they can hold up in the marketplace

The same questionmarks apply to scattered attempts to boost some key petrochemicals and plastic resins. The cost pressures are certainly there. But it may take several more months—probably until late spring—before the market is strong enough to sustain any meaningful advances in these sectors.

But even with some increases being inevitable as the year wears on, the feeling is that the majority of advances will be relatively modest. Most econometric models would certainly seem to confirm this optimism—with consensus forecasts suggesting little more than a 4-5% overall advance in industrial price averages for 1983 as a whole.

STEEL SCENE

Signs of a demand pickup

The hard-pressed steel industry is finally showing signs of coming out of its deep hole.

So say the people who should know best—buyers and service centers. Both groups, responding to new monthly surveys, see substantial demand gains over the next quarter or so.

The latest Steel Service Center Institute (SSCI) report, for example, finds an overwhelming 82% expecting an increase in incoming orders over the next three months. You have to go back years to find a figure that high. In any event, it contrasts sharply with the 15%-and-lower readings of late last year.

True, steel buyers aren't quite that optimistic. But here, too, there's an upbeat note—with 24% of those responding to a recent query saying they expect to increase their take of the metal over the next few months.

Equally impressive is that this last number is four times the comparable readings of late 1982 and the first time since April 1981 that those anticipating increased purchases outnumber those planning on declines.

Inventories

The brightening demand picture also has not altogether reversed the inventory paring trend—although future reductions are not expected to be quite as drastic as those made during the past year. The reason for continued paring: Most respondents feel current inventories are still too high.

On the other hand, there could be a fairly rapid change in this evaluation, because months' supply in both sectors has been declining. In the case of steel buyers, for instance, the current 1.9 months' supply is the lowest it's been in several years.

Indeed, the beginning of an inventory shift may already be in the works.

Imports

Imports will also bear close watching—as prices of incoming metal still remain well under comparable domestic levels.

In the case of PMs, for example, some 19% feel import tags are significantly lower, with another 56% classifying them as slightly lower.

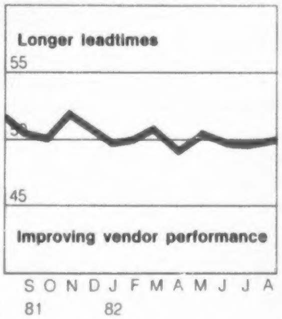
And the story is much the same on the service center level where 17% of the respondents report price breaks of over 20% in the carbon steel area.

Equally significant, there's little sign that either group is willing to forego such bargains over the coming months. Indeed, 14% of the buyers and 10% of the service centers say they expect to increase their dependence on foreign steel this spring and summer.

Monthly procurement status report

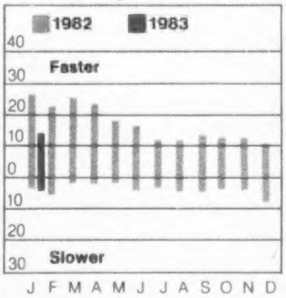
Leadtime index

A 'diffusion' index based on 158 key commodities. Above '50' indicates a tendency for leadtimes to stretch out. Below '50' suggests improving vendor performance.

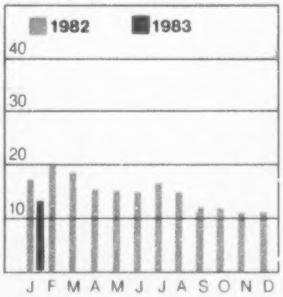


Delivery performance

Percent reporting deliveries

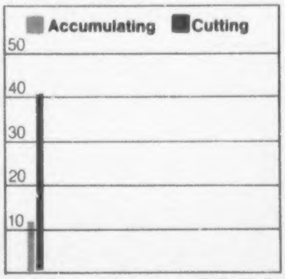


Forward commitments



Inventory strategy

Percent of respondents



Source: NAPM

PROCUREMENT STATUS

Smooth sailing ahead for leadtimes

Early 1983 doesn't look to be all that different from late 1982—with virtually all product lines in ample supply and leadtimes holding pretty much at bare minimum levels.

Sign of the times: ***PurchasingWorld's*** exclusive leadtime index remains stuck at the neutral 50 level (see chart). In fact, more than 90% of the close to 160 items monitored every month have remained unchanged since last fall.

To be sure, a few buyers voice concern about a modest stretchout by late spring or summer—if the expected business pickup is more robust than expected. But they are only a small minority—with most of the purchasing executives queried in ***PW's*** latest procurement survey planning on another 3-6 months of smooth sailing.

Their optimism may well be warranted. The NAPM Business Survey Committee—noting the first uptick in production in a long time—suggests vendors are already preparing for better demand in the months ahead.

In any event, buyers continue to play their inventory cards close to the vest. Some 40% of queried buyers say they are still paring—far outnumbering the small 11% who are currently adding to stocks.

Another sign of underlying buyer confidence: Forward commitments for production materials remain near historic lows. Specifically, only 13% now are ordering 90 days or more in advance—only about half the comparable 25-30% pre-recession reading.

Leadtimes and availability

Chicago: Lumber leads have dropped (to only 2 weeks). No problems in metals either—with these waits (in weeks): c-r sheets (4-5), h-r sheets (2-3), h-r bars and structurals (2), steel plates (2), aluminum sheet and coil (6-8), aluminum angles, bars, and extrusions (4), brass and copper sheet (5), brass rods (2-3).

Cleveland: Only minor changes this month—with cold-finished aluminum in fractionally (to 6-7 weeks) and maintenance paint out (to 2). Corrugated and folding boxes remain the same at 3 and 4 weeks, respectively. Ditto, polyethylene and PVC (2-3), lumber and plywood (3), shrink film (3), and alloying metals (on demand).

Los Angeles: Syn rubber is out to 2 weeks. A bit longer leads also on filler clay (2), heavy duty steel (10-12), and heavy electric equipment (17-26). But these are affected by reduced leads on heavy duty valves (9-26), carbon black (1½), adhesives (½), brass castings (8-9), and electro-mechanical devices (8-9).

BUSINESS DATATRAK

Houston: Shop fabricated carbon steel pipe is in to only 13-26 weeks. MRO supplies are stable at 2-4 weeks. So are most other items, including packaging (0-4), mill steel (4-8), and most electronic parts (4-6). Buyers say stability is due to the fact that it's physically impossible to bring things in any faster.

Philadelphia: Corrugated boxes have inched up to 4 weeks. Ditto, carbon bar from mill (now 4-5). Unchanged (in weeks) are wire bound resistors (10), linear ICs and metal film resistors (both 10-12), low-power Shotky ICs (14-16), lube oils (6-8), standard drills (2-4), grinding and polishing wheels (4-6), carbide tools (10-12).

Pittsburgh: Steel drums remain surprisingly available—with only 1 week waits for most kinds of steel and fiber types. Also holding unchanged are corrugated (2-3), folding boxes (4-5), multiwall bags (4-5), lumber and plywood (2-4), plastic film (2-4), maintenance paint (5), and polyethylene and PVC resins (both 4).

Leadtimes (in weeks)

STEEL	**Now**	**Month ago**	**Six months ago**
Sheet (Phil)	5	5	5
C-R Sheet (Chgo)	4½	4½	4½
Plate (Phil)	4½	4½	4½
Plate (Chgo)	2	2	2
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5	5	5
H-R Bars (Chgo)	2	2	2
Cold-Drawn Bars (Phil)	6	6	12
Galvanized (LA)	4	4	3½
Galvanized (Chgo)	4½	4½	4½
Structurals (Chgo)	2	2	2
Structurals (Hous)	17	17	17
Tubing (Phil)	19	19	19
Grey Iron Castings (LA)	9	9	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	7	7	7
Pipe, Carbon (Hous)	20	26	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	8½	9	9
ICs (Linear) (Phil)	12	12	16
Motors (Phil)	21	21	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	7	7	7
Relays (Chgo)	15	15	15
Resistors (Chgo)	10	10	10
Resistors, Wirebound (Phil)	10	10	10
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	2	2½	2
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	1/5	1/5	1/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	1	1½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	2
Paint, Coil Coating (Pgh)	3	3	3
Paint, Maint. (Clev)	2	1½	1½
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	2½	2½	2
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	½	½	1
PVC Resin (Pgh)	4	4	4
Titanium Dioxide (LA)	1	1	1

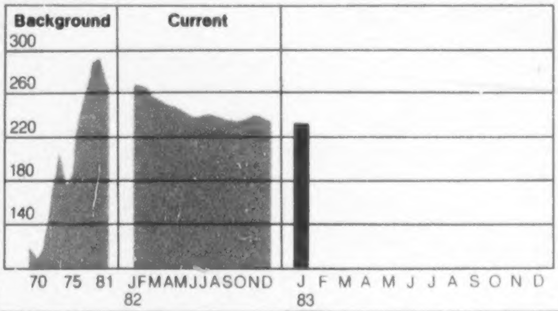
PACKAGING	**Now**	**Month ago**	**Six months ago**
Bags, Kraft (Pgh)	4	4	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	7	7	11
Cartons, Corrugated (Clev)	3	3	3
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	4½	4½	7
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	5	5	5
Shrink Film (Clev)	3	3	3
Drums, Fiber (Pgh)	1	1	3½
Drums, Steel, Std. (Pgh)	1	1	2½
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	6½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	7½	7½	7½
Aluminum Plate (Chgo)	7	7	7
Aluminum Sheet (LA)	5½	5½	7
Aluminum Sheet (Chgo)	8	8	8
Brass Castings (LA)	9	9	7
Brass Rods (Chgo)	2½	2½	2½
Brass Sheet (Chgo)	5	5	5
Brass Tube (Chgo)	9	9	9
Copper Fittings (LA)	4½	4½	3
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	4½	4½	6
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	4
Wire, Specialty (LA)	5	5	6
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	22	22	22
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	56	56	56
Compressors, Reciproc. (Hous)	45	45	45
Fasteners (Chgo)	½	½	½
Fasteners (LA)	8	5	10
Fasteners, Std. (Phil)	3½	3½	3½
Heat Exchangers, Carbon-alloy Steel (Hous)	30	30	32
Heat Exchangers, Hi-pressure (Hous)	43	43	37
Insulation Mat'l. (LA)	11	11	4
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1	1	1
Pumps (Hous)	41	41	41
Pumps (LA)	10	10	10
Rubber, Synthetic (LA)	2	1½	3
Rubber Hose (LA)	6	6	5
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	13	13	13
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Index: 1967 = 100

Latest month	**232.1**
Month before	**227.4**
Year ago	**264.7**



Latest spot market prices

FERROUS METALS	Latest price	Previous month	Year ago
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	347.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	22.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	22.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	23.40
Steel, bars, dlvd. Phila., cwt., merchant quality	17.50	17.50	14.35
Steel, bars, Pitts, cwt.	17.50	17.50	14.35
Steel, bars, C.R., Pitts, cwt.	31.00	31.00	29.20
Steel, plates, Pitts., cwt.	24.25	24.25	24.25
Steel, plates, H.R., Pitts., cwt.	24.25	24.25	24.25
Steel, sheets, C.R., Detroit, cwt.	24.65	24.65	24.65
Steel, strip, C.R., Chi., cwt.	29.05	29.05	29.05
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.555	0.470	0.520
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb	4.95	4.95	4.60
Brass, red, 85%, [sheet], lb.	1.26	1.24	1.20
Brass, yellow, [sheet], lb.	1.20	1.18	1.14
Cadmium, ton lots, lb.	1.00	1.00	1.40
Copper, electrolytic, wire bars, refd., lb.	0.79	0.77	0.78
Copper sheet, over 24 in., lb.	1.35	1.33	1.29
Lead, common, N.Y., lb.	0.205	0.205	0.300
Magnesium, pig ingot, [99.8%], lb.	1.34	1.34	1.34
Mercury, 20 fl. lots, N.Y., fl.	350.00	380.00	375.00
Molybdenum Climax Oxide/bags, lb.	4.00	4.00	8.50
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	13.90	12.00	7.72
Tin, Straights, N.Y., lb.	6.37	6.21	7.72
Zinc, Prime West, East St. Louis, lb.	0.400	0.380	0.420
Zinc, die casting alloy, No. 3, lb.	0.465	0.465	0.485
PAPER			
Bond paper, No. 1 sulfite, water marked, 20-lb., 4 cartons, cwt.	68.60	68.60	68.60
Gummed sealing tape, carton	15.70	15.70	15.70
Offset paper, No. 1 Grade	49.70	49.70	45.50
Folding boxboard, white clay coated 80 bright, ton	372.90	374.55	411.67
Wrapping paper, std. distribution cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	250.00	250.00	270.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.236	0.229	0.239
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	0.95	0.95	1.00
Cotton middling, 1", N.Y., lb.	0.616	0.615	0.591
Printcloth, 48", 80x80, N.Y., spot. yd.	0.61	0.61	0.71
Army duck, 37", 13 oz., yd.	1.60	1.00	1.80
Blended printcloth, 64", 78x54, yd.	0.66	0.65	0.72
20s combed yarns	1.68	1.70	1.73
Wool tops, N.Y., lb.	3.60	3.60	3.60

CHEMICALS	Latest price	Previous month	Year ago
Acrylonitrile, tanks, lb.	0.430	0.460	0.445
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	210.00	210.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.45	1.42	1.51
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.66	0.66	0.66
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	0.101	0.101	0.101
Glycerine, synthetic, tanks, lb.	0.730	0.725	0.805
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.715	0.715	0.715
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.265	0.310	0.420
Polyethylene resin, low density liner film grade (market price), lb.	0.275	0.275	0.270
Polypropylene, homopolymer grade (market price), lb.	0.37	0.37	0.36
Polystyrene, general purpose grade (market price) lb.	0.38	0.38	0.38
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.350	0.350	0.375
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	135.00	135.00	147.50
Sulphuric acid, 66%, commercial, tanks, ton	56.85	56.85	93.69
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.45	1.45	1.48
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	328.00	300.60	313.19
Lumber 2x2, pine, mbf, cl	311.60	288.80	293.63
Plywood, plyform, 3/4", msf, cl	539.95	557.35	577.00
Plywood, 5/8", msf, cl	340.65	340.25	340.24
Cement, bulk, ton, tl	63.18	62.02	62.13
Sand, ton, cl	5.92	5.89	5.98
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	45.93	46.17	45.42
Crushed stone, 1½", ton, cl	7.85	7.81	7.69
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.75	0.75	0.73
Gypsum sheathing, ½"x1"x8", msf, tl	158.15	159.04	153.85
Brick, common, per thousand, tl	172.35	173.00	169.30
Asphalt paving, AC-20	155.57	156.77	168.68
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.76	6.63	6.70
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	22.00	22.75	22.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	28.75	30.50	33.30
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.775	0.810	0.915
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.829	0.854	0.950
Heating oil, No. 2, Chi., bulk, gal.	0.770	0.863	0.973
Heating oil, No. 2, N.Y., bulk, gal.	0.828	0.858	1.006
Heavy fuel, PS 400, Los Angeles, rack, bbl.	25.00	25.05	24.00
Jet kerosene, gal.	0.830	0.860	0.940
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.450	0.475	0.410
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	67.00	62.00	91.00
Steel, No. 1, hvy., dlvd., Chi., ton	66.00	54.00	78.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.655	0.595	0.640
Copper, No. 2, East, wholesale buy, dlvd., lb.	0.580	0.530	0.575
Brass, red, East, wholesale buy, dlvd., lb.	0.615	0.555	0.660
Brass, yellow, East, wholesale buy, dlvd., lb.	0.350	0.315	0.350
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	0.275	0.230	0.265
Alum., mixed clip., E., wholesale buy, dlvd., lb.	0.295	0.240	0.280
Zinc, old, East, wholesale buy, dlvd., lb.	0.075	0.075	0.140
Lead, clean solids, East, wholesale buy, dlvd., lb.	0.115	0.100	0.190
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	5.00	5.00	9.00
Paper, old corrug. box, dlr., N.Y., ton	4.00	4.00	7.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.11	0.10	0.08
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.11	0.11	0.14

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

APR/1983

PurchasingWorld

New challenges for basic metals

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PurchasingWorld

Vol. 27, No. 4 - April 1983

Helping you manage the business of buying

Cover photo courtesy of Steel Service Center Institute.

6 Letters

11 *PW* Predicts
Chain reaction from oil price drops

17 Datatrak
Key economic trends 17
Current prices 19
Steel scene 22
Procurement status 24
Leadtimes 26
Spot market prices 28

44 New challenges face the basic metals
For the basic metals, the rules of the game are changing fast. By the middle of this decade, the industries will bear little resemblance to their staid, order-taking profiles of the past.

50 You can make stockless purchasing work!
By using computer technology and working with vendors who think the same way, you can eliminate your production parts inventory overhead.

56 *PW* Data File Update
Here are complete specifications on electronic typewriters and copiers, introduced since the publication of our first annual ***PW*** Business Systems Data File (Oct. 1982).

60 Buying what's never been bought before
Purchasing of prototypes requires a nontraditional approach to contract negotiations. Here's what to watch for in setting terms and conditions.

64 Transportation in the 80s: Higher costs, better service
To stay competitive in the changing transportation market, shippers and receivers choose from several available strategies. Among them are a number of familiar purchasing methods.

68 Packaging prices/demand present no problems
Although packaging bargains may be a little bit more scarce in the next several months, prices are expected to remain negotiable, according to purchasing managers responding to a recent ***PurchasingWorld*** survey.

73 *PW* TechFile: Grinding wheels
Here are the factors that need to be evaluated when selecting a grinding wheel for a particular application.

80 Value Analysis
Quality wins the game

81 Products

86 Purchasing Law
Who is the offeror?

110 Negotiations
Be ready for recovery

114 *PW* Perspective

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PW PREDICTS

Robert S. Reichard, executive editor

Chain reaction from oil price drops

Another downward adjustment in 1983 inflation estimates may be in order. Reason: The recent decline in oil prices could well knock anywhere from 1½-2% off the industrial price averages by yearend. And the cost-of-living could be lower by about ½-1%.

That's what the econometric models are signaling. And one economist also offers this rule of thumb: Each $1/barrel decline in the average price of oil cuts the inflation rate by 0.2%.

All this makes pretty good economic sense. Lower petroleum tags mean (1) reinforcement of today's anti-inflation psychology, (2) more pressure to hold the price line in other energy sectors, and (3) lower-than-expected costs for many energy-intensive industries.

On the latter score, for example, cheaper oil lowers the cost of chemicals, fertilizers, plastics, synthetic fibers, synthetic rubber, and many other goods. It's also a bonus for the transportation industry where fuel is often the biggest cost.

One only has to go back to 1976, when petroleum prices also slipped, to see the effect. It's no coincidence that inflation that year showed a marked deceleration. On a GNP price deflator basis, quotes rose only 5.2% that year—more than four percentage points under the rate of the previous year.

There are other benefits, too. Projected lower oil prices could (1) knock as much as $10 billion off our balance-of-trade deficit, (2) reduce the average household energy bill by as much as $75-100 year, and (3) slow wage increases, as automatic cost-of-living adjustments drop and workers (experiencing lower inflation rates) reduce their demands.

The price of money is also likely to fall. Smaller price increases permit the Fed to tread a bit lighter on the monetary brakes. And it's highly unlikely that credit authorities will let real interest rates rise above the current 6-8% (more than double the historical level). Implication: The nominal rate will continue to edge lower.

Here's how it all adds up for overall 1983 inflation:

- **GNP deflator:** Best bet here is a drop in the rate of rise to about 4½%.
- **Industrial wholesale prices:** Look for only about a 5-6% average increase—though some hard-pressed basic materials such as metals may rise faster.
- **Cost of living:** Odds now favor a just-under-4% rate of inflation as compared to the original 4.9% budget estimate.

Aluminum

Prices are firming on a broad front. Thus: (1) discounts on common alloy sheet have narrowed, (2) building sheet is moving up 4¢/lb, and (3) exchange and merchant ingot is now running close to 30% above levels prevailing as recently as late 1982.

Orders, too, have perked

Fasteners

Buyers are still calling the signals in the multibillion dollar industrial fastener market.

And with good reason: Demand dropped off about 8% last year. And if the industry can recoup just half of the loss this year, it will be lucky.

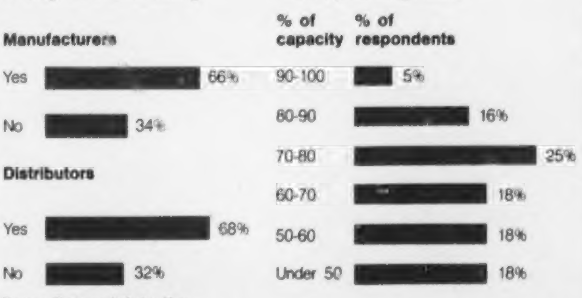
But perhaps the best indicator of continuing softness comes from a just-completed *Fastener Industry News* survey of manufacturers and distributors. It suggests that discounting is still more the rule than the exception (see chart).

Products mentioned by producers as being subject to 20%-or-higher discounts in recent months include studs, lock washers, flat washers, steel expansion anchors, bearing hardware, elevator bolts, and nuts.

One of the big reasons for all this weakness is imports. Some $600 million worth of fasteners entered the country last year—with Japan by far the largest supplier, but with China and Brazil beginning to show big percentage gains.

This, when added to poor overall demand, has been making for a capacity glut. The survey, for example, finds that more than half of the industry expects to operate at under 70% of its potential in the first half of 1983—hardly the harbinger of any major price-firming trend.

Fasteners still a soft market



Plenty of discounting

Low operating rates

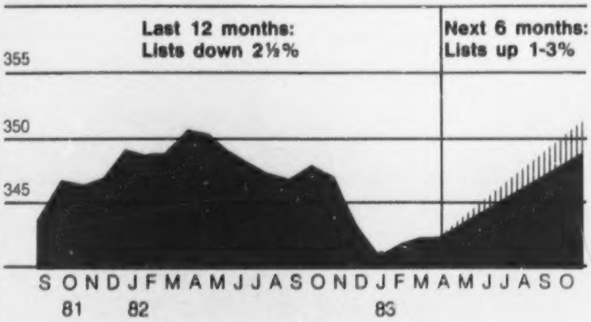
Source: Fastener Industry News

PW PREDICTS

Steel

Steel mill products

Index: 1967 = 100



CURRENT SITUATION: The newly inked three-year pact calling for a temporary 9% wage cut and other concessions has to be regarded as a positive sign. It will help to (1) hold the line on imports, (2) speed up plant modernization, and (3) reduce upward cost pressure on prices. Meantime, **ordering has picked up considerably in recent weeks.**

DEMAND: If all goes according to plan, shipments could reach the 72-75 million-tons range this year. While a strong 20-25% above 1982's disastrous 60-million-ton level, that's still far under the 87 million tons that cleared the market as recently as 1981. **Biggest gains will be in the auto and construction sectors.** But there could be some easing off in machinery, farm equipment and railcars. Overall the industry will be hard put to reach even 95 million tons by 1986 or 1987.

SUPPLY: It looks like pretty clear sailing for the next year or two—despite the fact that domestic capacity fell some 5% last year. The AISI's operating rate is still not much above the 50% mark. While some declines in 1983 imports are likely, **overseas mills are will probably ship close to 15 million tons to the United States.** Finally, there are new capacity additions—especially in the mini-mills sector, which added nearly 7% last year.

PRICE OUTLOOK: Brace for hikes. The 10 largest U.S. steelmakers lost $3 billion in 1982—a situation that will have to change. Add an expected 20-25% increase in demand for 1983, **and the question is not whether tags will rise, but rather by how much and when.** Look for a gradual drying up of today's king-sized discounts—plus a few scattered hikes in lists. **Best bet: a 1-3% boost in lists by fall—with transaction prices up anywhere from 5 to 10% over the same period.**

up—with first quarter 1983 bookings running at the highest rate in over a year. But despite all this, the spread of the rise could make for some nearterm correction.

On the other hand, the longterm trend still looks bullish because of (1) slowly falling U.S. producer inventories, (2) rising cost pressures, and (3) improving demand. As such, it would not be unrealistic to expect a 65-70¢/lb ingot price towards the end of the year.

Office equipment

Competition continues to make for some good bargains. One new wrinkle: Grey market copiers (low-priced plain-paper copiers being sold by so-called unauthorized dealers) are going for as much as 25% off the official list. Easiness is also cropping up in portable computers (some models were recently slashed by up to 20%) as an increasing number of producers jump into this burgeoning market.

Copper

Prices are now running well above late-1982 levels. But a good deal of the firming looks to be speculative. Current estimates suggest only about a 4% increase in overall U.S. chewup this year—a figure that would leave totals well under 1981 levels. Indeed, it may not be until 1984 or 1985 that earlier peaks are reattained.

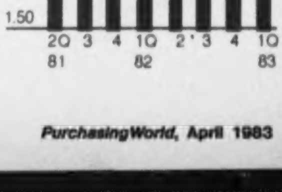
Another price restraining factor is overcapacity. The domestic industry, despite some nine reopenings, is still operating at only around 70% of its potential. Nevertheless, some further nearterm price firming is possible—maybe close to 90¢/lb by late spring—as buyers, living with extremely low inventories, begin to hedge against a possible midyear U.S. mine work stoppage.

Nickel

It's becoming increasingly hard to find the fantastic bargains of late last year. Sign of the times: Dealer cathode is now selling in the $2/lb range—some 20-25¢/lb above recent lows.

Behind the recovery: slowly rising demand. But don't expect any major spurt—not with producer inventories still near a year's supply at current buying levels. It is also doubtful whether global demand will rise the 10% (to 1.07 billion lb) being predicted by some of the more optimistic analysts. In any event, any price bounceback to the unrealistic $3.20/lb producer list still seems a long way off.

Nickel prices
(Dealer cathode) ¢/lb



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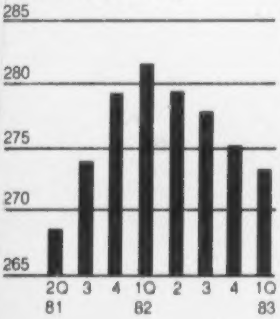
Paper and products

It's pretty much of a mixed bag here. The current situation is shaping up something along these lines: Corrugated is still reporting discounts in the 5% range in many areas of the country. But look for a $20/ton boost in linerboard before too long. There is also plenty of discounting in newsprint, folding cartons, grocery bags, and sacks. Lists on registered bond and uncoated No. 3 papers have also slipped. Ditto on market pulp, where quotes have dropped $30-40/ton.

Paper prices
(excl. newsprint)
(Index: 1967 = 100)



Polyvinyl chloride

Take the new 8¢/lb list price hike that some producers listed for this month with a couple of grains of salt. Best bet: little more than a 2-3¢/lb raise in market levels, which would bring the key pipe-grade resin into the low 30s—still well under the new 38¢/lb list. Any further advances are also likely to be limited. Reason: oversupply. The industry this year will probably be able to raise sales of suspension resins some 7% (into the 2.4-million-metric-ton range). But that's still far under capacity (currently put at just over 3.2 million tons).

Specialty steel

It basically is a mixed picture here. On the downside is the failure of mills to post a 6% increase in electrical grades. Buyers say protection at old rates has been extended in some cases to midyear.

On the other hand, producers are mounting a drive to reduce discounting on common grades and sizes of stainless sheet—discounts that in some cases have been running as high as 40%. Aim is to bring the shading down into the more tolerable 25-30% range.

Phenol

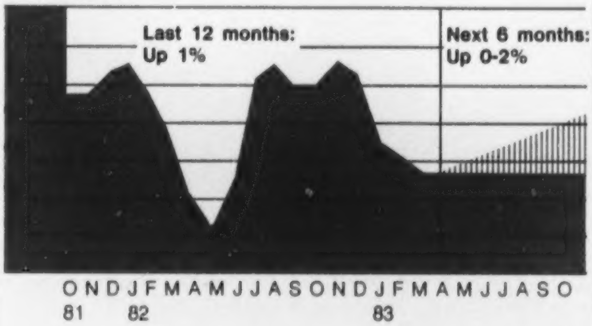
Demand is beginning to improve—with 1983 projections calling for as much as a 17% increase in over 2.4 billion lb. Nevertheless, price softness persists—with much of the impetus stemming from declining crude oil prices and a capacity glut (industry potential is put at near 3.34 billion lb). Press hard enough, and you can probably get 3-5% off currently prevailing 32½-36¢/lb list levels.

ABS plastics

Right now market quotes remain relatively stable. Holding grades, for exam-

Energy

Fuel and power
Index: 1967 = 100



CURRENT SITUATION: The new round of OPEC price cuts is the prime mover here. Not only will the slide bring down the prices of refined petroleum products, but it will also put a ceiling on what other types of competing fuels can command. **And, of course, what happens to fuel inputs will also impact on electricity rates.** As recently as late 1982, most price analysts were betting on at least a 5% increase in 1983 fuel and power costs. Not so anymore. The overall advance is likely to trail the annual inflation rate for the first time in over a decade.

DEMAND: The pricing lull is being aided by relatively sluggish usage patterns. Right now, forecasts call for about a 1½% increase in U.S. energy overall consumption—**not nearly enough to recoup last year's big 3% decline.** Even with falling oil prices, petroleum usage isn't likely to advance by more than 1%.

SUPPLIES: No sweat anywhere. The biggest glut, of course, is in oil, where it still remains to be seen whether the producing countries (both in and out of OPEC) will adhere to their new output curtailment promises. Natural gas has also been in oversupply of late. And in coal, it will probably take most of 1983 before bulging aboveground inventories can be brought down to size. **Increasing efficiency will also help slow down any quick reattainment of energy supply-demand balance.**

PRICE OUTLOOK: Precise pinpointing will be difficult in the uncertain days immediately ahead. One thing for sure, refined petroleum products will be down. Natural gas, on the other hand, will continue to edge higher—though probably not as fast as previously forecast. The same is true of electricity and coal. **Upshot: 1983 energy averages as a whole won't rise by more than 1-3% vis a vis last year.**

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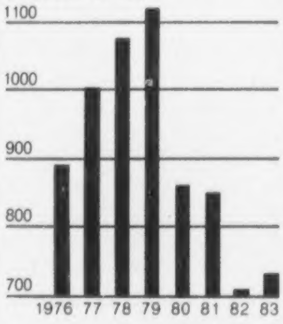
ple, go for $1/lb or more—with construction grades commanding considerably less. But look for price-boosting attempts later on as production costs continue to rise and demand slowly picks up.

On the other hand, overcapacity will remain a problem (as a projected 3-4% consumption increase into the 350,000-metric-ton range this year still leaves vendors operating at less than 50% of their potential. Upshot: Any 1983 price increase is likely to be quite modest—certainly nothing more than 5%, and maybe even a lot less than that.

ABS consumption
(millions of lb)



Zinc

Any meaningful price pickup is still nowhere in sight. The evidence on this score is pretty conclusive: (1) producer inventories are still rising, (2) merchant material still moves at under producer lists, and (3) LME quotes remain well below domestic U.S. levels.

That's not to say that demand isn't picking up a bit. But it's nothing sensational as users continue to buy hand-to-mouth. Upshot: No chance of the metal recouping last year's big 18% decline. And while prices are likely to firm somewhat over the longer pull, the rise will be slow and gradual—with the metal lucky to reach even the 45¢/lb level by the fourth quarter.

Methanol

Disappointing demand is taking its toll. Material is said to be moving for as low as 46¢/gal—far under the official 71½¢/gal list. As in many other chemicals, the softness can be traced back to overcapacity—with operating rates at latest report hovering in the low 65% range.

The recent EPA decision turning down a request to use methanol in unleaded gasoline (at levels as high as 3%), isn't calculated to firm up prices either.

In any event, don't expect any really significant price hikes until summer—and even that may be wishful thinking on the part of producers.

Lead

There's still precious little firming—as U.S. producer inventories continue to mount and the LME holds at near-record levels despite some exports to the Red bloc.

True, some 1983 domestic consumption gain is likely. But it won't be anywhere near the big 10% increase suggested by a recent government projection. Reasons: Battery demand has been hurt by the warm winter, and the lead-in-gasoline phaseout continues.

Demand in the latter area, for example, is expected to drop some 8-10% annually over the next few years. All in all, market fundamentals suggest that the heavy metal will be hard-pressed to reach even the 25¢/lb level.***PW***

Welding equipment

Demand for welding equipment could be in for some hefty increases over the next few years. But it won't set off any big price hikes. Indeed, boosts will remain quite modest—with little more than a 2½%-or-so average advance projected from now through 1985.

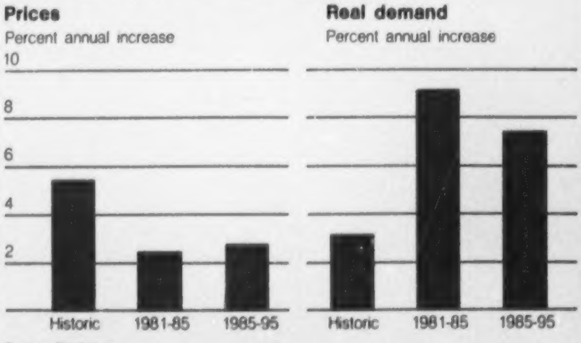
That's the conclusion of a just-completed Predicast study. More important, these basic trends are expected to continue for the rest of the decade and into the early 1990s—with annual price hikes over this extended period likely to still remain under a 3% annual rate (see chart).

The growth estimates are pretty much backed up by recent government forecasts that show real advances running at almost double the GNP rate.

Predicast analysts attribute this to increased demand from such end-use markets as energy-related construction, aerospace, fabrication, and metalworking. They see arc welding and gas welding remaining number one and number two in the industry—each growing at near a 10% annual rate.

But the most spectacular growth could be in welding robots which will grow at a 25% annual clip. Impressive gains (16-18% a year) are also anticipated for electron beam and laser beam types.

Welding equipment: A long look ahead


Prices
Percent annual increase

Real demand
Percent annual increase

Source: Predicasts

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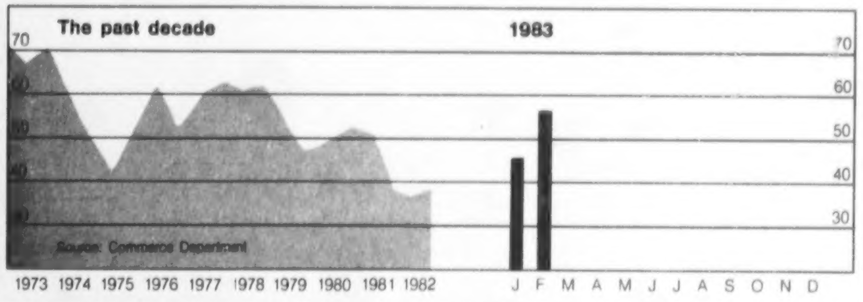
BUSINESS DATATRAK

NAPM business barometer

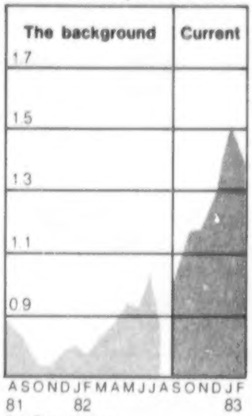
Based on five indicators (employment, inventories, new orders, production, vendor performance)



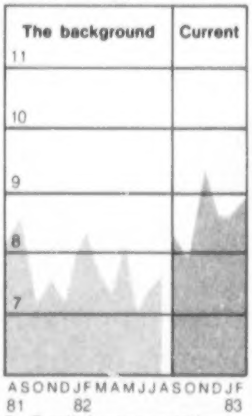
Source: Commerce Department

Leading indicators

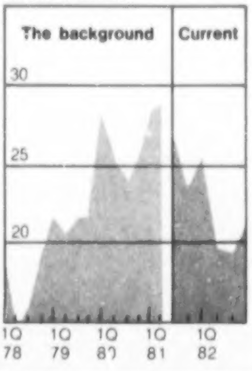
1. Housing permits
Millions, seas. adj. annual rate



2. Car sales
Millions, seas. adj. annual rate



3. Capital appropriations
Billions of dollars



KEY ECONOMIC TRENDS

Leading indicators show growing strength

Lower projected inflation rates are making for some upward revisions in the 1983 GNP trend.

While the new estimates vary, it's significant to note that very few people these days are forecasting less than a 2½% real growth rate. Indeed, compare the fourth quarter 1982 to the fourth quarter 1983 and the gain could be significantly greater than the above average projection suggests—probably something in the order of 4%.

Indexes

Indexes of leading indicators also tend to confirm the better-than-originally-anticipated trend. The NAPM Business Barometer (see chart above) has taken a leap forward—jumping to 56.6 (some 11 percentage points above the previous month).

Not only is that the biggest monthly spurt in years, but it brings this key yardstick into the above-50 range—signifying that industrial activity will be in the plus column over the next few months.

A similar big advance is noted in Uncle Sam's index of leading indicators. In early 1983 this barometer recorded its biggest one-month increase in over 30 years.

Zero in on some of the major components of these broad-gauge indicators, and the picture is equally encouraging. Housing permits (a forerunner of actual building starts) has been rising steadily—suggesting that as many as 1.5 million new units may be constructed this year.

Consumers, too, are finally showing a few signs of coming back into the market. The Conference Board's "confidence" index, for example, is now in a rising trend after more than a year of bumping along at near-alltime lows.

Car sales also are doing a bit better. The overall total still leaves a lot to be desired, but the latest nearly 9-million-unit annual rate is better than the 7-7½ million-unit pace that prevailed through much of 1982.

Laggers

About the only really soft area these days is capital equipment. Blame this on continuing overcapacity and still-low profit margins that together are putting a damper on new spending plans.

More important, the investment outlook is likely to remain disappointing, judging from the latest capital appropriation survey. Despite a small upward blip, totals of money appropriated for new plant and equipment remain better than 20% under the peaks of a few years back. It clearly tends to support most forecasts which point to a fractional drop in the real or physical volume of capital spending over the current year.

PM salaries are keeping pace

Purchasing executives are holding their own vis a vis other industrial managers. That's the news coming out of a recent Administrative Management Society (AMS) survey.

The typical manager, for example, earns an average of about $30,600 per year—up 7.7% from year-earlier levels. The figure also compares favorably to (1) the $27,861 average of 20 middle-management positions surveyed by the AMS and (2) the $30,300 (Canadian dollars) earned by the American purchasing manager's north-of-the-border counterpart.

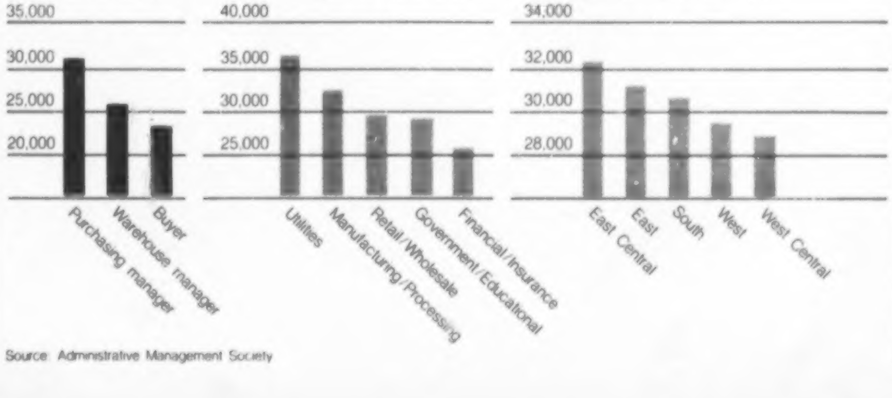
Other key findings of the new study:

- *Types of business:* Above average PM salaries are noted for those working in the utilities sector ($36,800) and in manufacturing/processing ($32,500). The lowest pay is in the financial/insurance sphere ($25,600).
- *Geographical areas:* Firms located in the East-Central part of the country pay PMs the biggest averages ($32,200), with the East region coming in second ($31,100). Southern purchasing manager's pay is fairly close to the national average.
- *Secondary purchasing positions:* The average warehouse manager makes $25,300, while the typical buyer earns a somewhat lower $23,300 per year. Both, incidentally, are under the overall national average for all the AMS managerial positions surveyed.

These figures also tend to confirm the findings of ***PurchasingWorld's*** latest detailed survey (taken during the summer of 1981). At that time, purchasing managers in companies just below the Fortune 500 were making average salaries in the $28,685-39,700/year range.

Meantime, watch for ***PW's*** updated comprehensive salary rundown which will be appearing in our September issue.

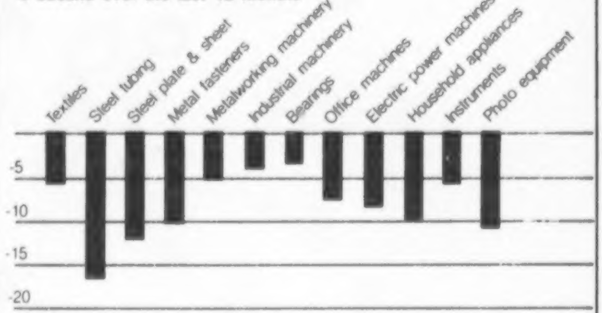
Purchasing pay profile



Source: Administrative Management Society

Import prices over the past year

% decline over the last 12 months



Source: Bureau of Labor Statistics

Import bargains continuing

Wondering why imports continue to come in at an ever-increasing clip? The adjacent chart detailing product-by-product price declines in imported lines over the past year provides some reasons.

Domestically-made items have also softened in many instances. But, by and large, the figures suggest that the gap between U.S. and overseas asking prices is widening.

Nor are the above findings traceable soley to 1982 softness in overseas markets. In the latest three-month figures, the declining trend in import tags seems to be continuing. Significant easiness over this most recent period is noted in (1) steel bars, rods, bars, angles, and shapes, (2) steel tubing, (3) metal fasteners, (4) metalworking machinery, (5) bearings, and (6) office equipment.

Behind all this foreign easiness: (1) a still-strong U.S. dollar which, other things being equal, reduces the landed cost to U.S. buyers, and (2) sluggish overseas domestic markets.

Improved data

Also worth noting: The U.S. Bureau of Labor Statistics, in releasing the latest price information, points out that its import index—after years of new inclusions—now has 100% coverage. In short, if it's a major import, our purchasing analysts can probably find a running history of price changes.

As one government spokesman puts it, "Buyers should now be able to make direct comparisons of domestic and import price trends". He adds that it's important to make sure that both the domestic and import indexes in question cover the same basic mix of goods.

CURRENT PRICES

Little change in price averages

Price averages continue to mark time—with very little in the way of overall change noted in basic industrial quotes since late 1982.

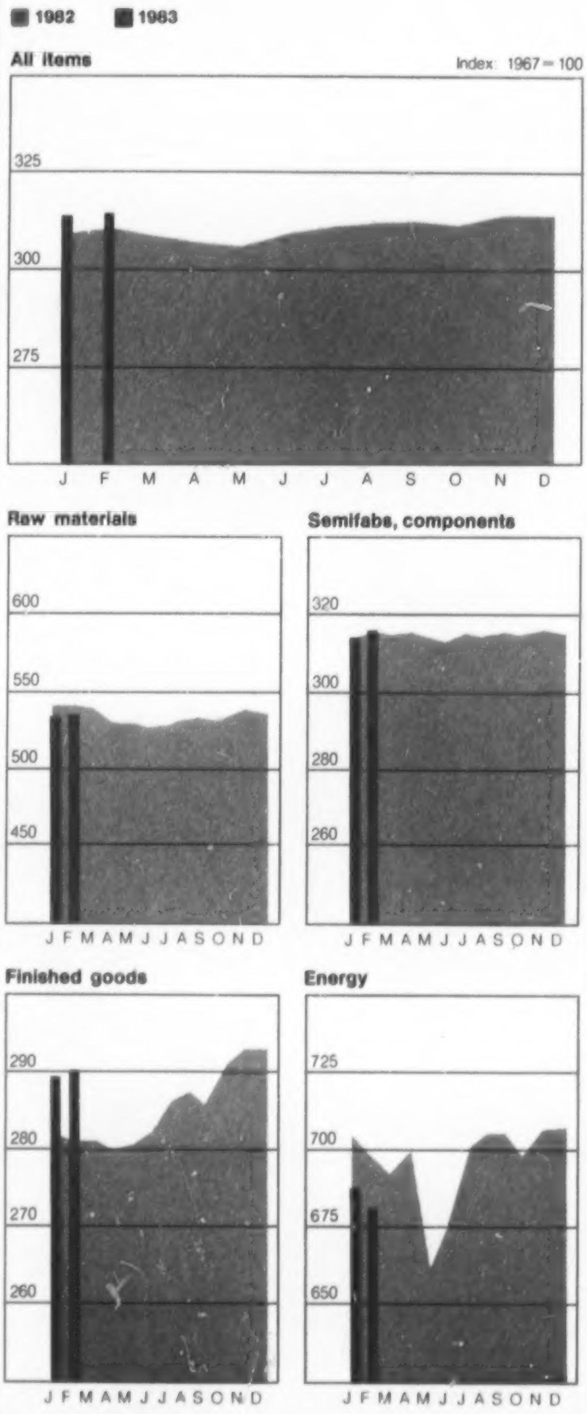
To some extent stability is the result of offsetting trends. Petroleum prices continue to fall (gasoline, residual oil, and lube products are off 12%, 8%, and 8%, respectively from year-earlier levels), as some more volatile metals have started to move up.

Aluminum, ingot, for example, has climbed close

This month's breakdown

	Latest level (Jan.)	% change from: Month ago	Year ago
Bearings	330.9	-1.3	2.8
Bolts, nuts, etc.	269.4	0.2	0.9
Chemicals, inorganic	301.6	-1.0	-1.3
Chemicals, organic	357.9	-0.8	-8.5
Concrete products	298.6	0.0	1.0
Corrugated cartons	328.7	-0.4	-3.0
Cutting tools, small	276.7	0.0	2.7
Electrical instruments	263.4	0.6	7.5
Electric lamps (bulbs)	299.2	0.7	8.7
Electronic components	278.8	0.2	2.5
Fans and blowers	336.5	0.0	0.8
Foundry and forge products	346.1	0.0	0.9
Fuel oil (residual)	1126.7	0.5	-7.6
Furniture, commercial	281.6	0.9	5.6
Gasoline	630.4	-3.6	-11.6
Glass, flat	229.7	2.0	6.2
Glass containers	358.2	-0.1	6.8
Gypsum products	259.7	2.3	3.7
Hand tools	343.3	0.4	3.1
Hand tools, power driven	220.3	0.6	0.3
Industrial furnaces	357.0	0.2	4.6
Integrating and measuring instruments	218.9	1.7	6.5
Internal combustion engines	335.3	0.1	5.7
Lubricating oil	820.1	0.0	-7.7
Lumber millwork	293.7	2.7	6.0
Material handling equipment	286.6	-0.1	0.0
Metal containers	327.0	0.4	0.8
Metal mill shapes (nonferrous)	307.7	1.1	1.0
Metal tanks	307.8	-1.0	-1.6
Motors and generators	317.7	1.1	3.4
Motor trucks (10,000 lb and under)	275.3	0.0	1.3
Office and store equipment	154.4	0.6	3.5
Paperboard	243.6	-0.4	-6.2
Paper boxes and shipping containers	248.1	-0.2	-0.6
Paper office supplies	226.8	0.0	3.4
Paint	265.1	0.0	2.4
Precision measuring tools	242.2	0.3	2.8
Pumps and compressors	349.6	0.4	2.3
Refractories	338.2	0.1	6.8
Rubber belts and belting	327.1	-0.3	4.1
Scales and balances	227.8	0.1	1.7
Steel products	341.5	-0.5	-2.2
Switchgear	262.1	0.2	0.5
Textiles, synthetic fibers	158.4	-1.4	-2.8
Textiles, gray fabrics	144.8	1.0	-2.3
Tires and tubes	259.1	1.1	2.2
Transformers and power regulators	220.3	0.0	0.4
Welding equipment	273.6	0.2	0.6
Wire and cable	201.8	1.9	2.0

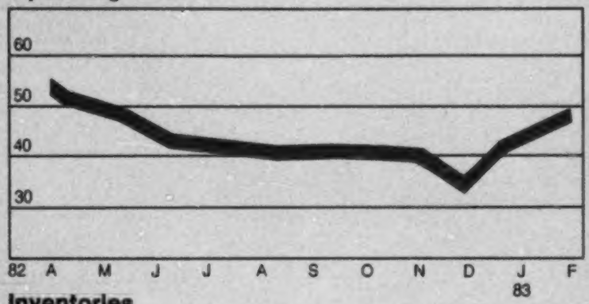
Industrial prices at a glance



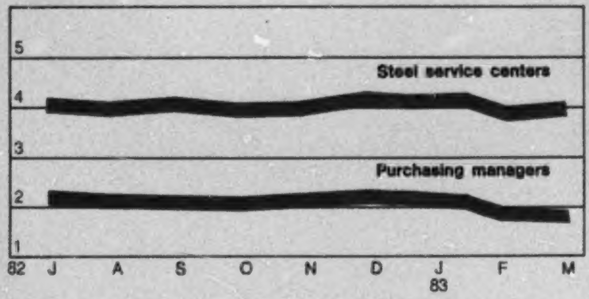
Source: Bureau of Labor Statistics

Steel

Operating rates



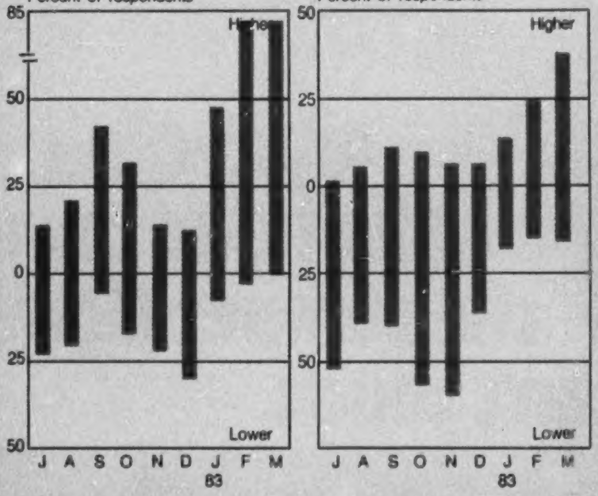
Inventories



Demand (over the next 3 months)

Service center incoming orders Percent of respondents

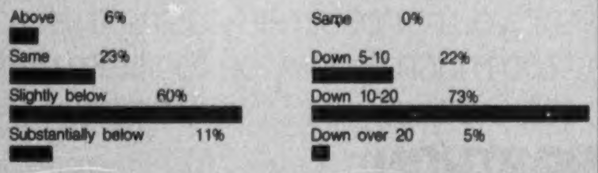
Steel buyer purchases Percent of respondents



Import prices (foreign vs. domestic)

Steel buyers

Service centers (carbon steel)



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

to 30% over the past few months. Copper, nickel, molybdenum, cobalt, cadmium, and most metal scrap are up appreciably.

There have also been some attempts to raise plastic resin tags. But the increases are generally small and on shaky ground—with overall averages not much above the lows of late last year.

A similar situation shapes up in basic petrochemicals. Some prices have actually edged lower in recent weeks. While better demand should buoy the market, the bullish effect may be offset by lower crude oil quotes.

Most machinery lines also remain soft. Some scattered price hikes have been reported. But they have been generally small and subject to negotiation.

Building materials, on the other hand, are edging up—particularly lumber. As construction improves, increases in other segments of this industry can't be ruled out.

STEEL SCENE

Expect better second quarter

Steel looks to be heading for a fairly good second quarter. That's the consensus of most metal buyers and metal service centers.

The number of purchasing managers who expect to increase steel buys the next three months is more than double those who predict retrenchment. The actual figures: increasing (38%) and decreasing (16%).

Distributors responding to the latest Steel Service Center Institute (SSCI) survey, are even more optimistic. Some 83% count on an incoming order pickup over the next quarter. None see a decline and only 13% anticipate little or no change.

Reasons

Several factors are probably behind this optimism.

The majority of both surveyed groups expect a pickup in general business activity over the next few months—with the impetus coming from increased activity in the auto, appliance, and defense areas.

Trim user inventories could be a factor. The average buyer's months' supply (1.81 at latest report) is at the lowest level in years.

Moreover, as production schedules are revised upwards, this key ratio could continue to fall unless additional tonnages are earmarked for storage bins.

Some 70% of queried buyers rate their steel holdings as "about right"—the largest such number in over a year.

Steel service centers seem more satisfied with inventory levels. The number who expect to increase tonnages is pretty much equal to the number who are still trying to pare.

Cautions

There is still little evidence of a big buildup.

As Andrew G. Sharkey, SSCI president, puts it, "I doubt that we'll see any major drive to increase inventories on the part of most service centers until the recovery is well underway. One key indicator to watch will be first-quarter auto production versus second-quarter auto sales."

Sharkey is also wary about the depressed capital equipment market, which he feels could remain low for the rest of 1983."

Imports

Another factor that will bear watching is foreign steel. While overseas metal is still generally cheaper than the comparable domestic product, there seems to be a trend toward fewer fewer big bargains.

Example: Only 5% of surveyed distributors say they're getting price breaks of more than 20% on overseas carbon steel—down from the nearly one-out-of-five figure of the previous month. And the 43% who report 10-20% price advantages in stainless is quite a bit smaller than the 59% and 47% readings of January and February.

Only 11% of surveyed buyers say foreign offering prices are "substantially below" comparable domestic levels.

More distributors say they intend to increase their dependence on offshore procurement in the next six months.

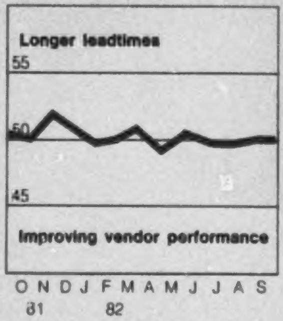
No reason for this is given. One buyer, however, feels it could be a veiled warning to domestic mills not to raise prices too fast.

Imports will continue to play a major role. Most steel analysts figure that incoming shipments will account for 17-18% of total consumption over the current year.

Monthly procurement status report

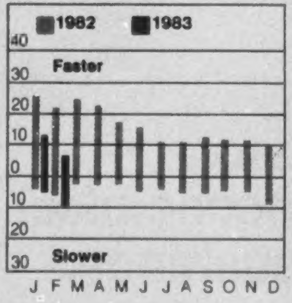
Leadtime index

A 'diffusion' index based on 158 key commodities. Above '50' indicates a tendency for leadtimes to stretch out. Below '50' suggests improving vendor performance.

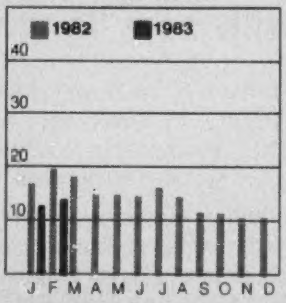


Delivery performance

Percent reporting deliveries

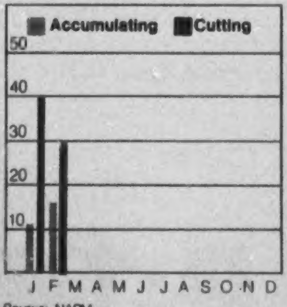


Forward commitments



Inventory strategy

Percent of respondents



Source: NAPM

PROCUREMENT STATUS

Suppliers keeping pace with orders

Vendors are pretty much keeping up with the increased order pattern of recent weeks—with little or no delivery stretchout reported.

Indeed, look at ***PurchasingWorld's*** exclusive leadtime index. It remains stuck at the neutral 50 level. Implication: Any scattered delays currently being experienced are being just about offset by improvement in still other areas.

The NAPM survey on speed of delivery also seems to confirm this conclusion. To be sure, the number of respondents noting delivery speedups has dropped. But the faster-versus-slower tally is still pretty much in balance—suggesting that if things aren't continuing to get better, they're at least not getting any worse.

The fact that there is still not one single item on NAPM's list of products in short supply would also seem to be reassuring.

Nevertheless, there is a bit of nervousness on the part of some buyers—with several responding to ***PurchasingWorld's*** latest procurement checkup noting that if business continues to improve, some problems are bound to crop up.

This, in turn, may be one reason why the number of purchasing managers committing on a hand-to-mouth basis is beginning to decline—from 22% in late 1982 to about 18% at latest report.

But such worries are probably unjustified, observes one top government economist. He cites the still-low (under 70% overall factory operating rate)—adding that even with 4% real GNP growth this year, the average utilization rate would be hard put to reach, much less top, the 75% level.

There are plenty of overseas sellers waiting in the wings. With their own countries' recoveries lagging, they may well be expected to push harder to expand their American beachheads. ***PW***

Leadtimes and availability

Chicago: Electronic waits are steady, but some modest stretchouts are seen by summer or fall. There are some extensions in aluminum to these weekly waits: Coil, sheet, bar, and common alloy plate (10). Much the same in steel: c-r sheet (12-14), h-r sheet (6-8), galvanized (12-14). But corrugated is in a bit (to 1-2 weeks).

Cleveland: Some modest reductions in plastics—with both polyethylene and PVC out only 2 weeks. Coil coating paint is in (to 2-3). But stretching out is cold-finished aluminum (to 8). Unchanged are corrugated (3), folding boxes (4), 2-ply fiber drums (2), alloying materials (on demand) and greaseproof papers (4-5).

Los Angeles: A mixed bag here. Stretchouts to these new weekly waits have hit copper tubing (6), grey iron castings (12), custom seals and gaskets (8), plasticizers (2), and electronic components (35-48). But coming in are insulation materials (8-10), electro-mechanical devices (8), pumps (8-10), and aluminum sheet (4-6).

BUSINESS DATATRAK

Houston: Heavy-wall reactors and converters are out a month (to 8-11). But steel fabricated pressure vessels are in (to 10-12 months). Electronic components are unchanged at 6-8 weeks. Ditto, tungsten carbide parts (14-16), packaging (2-4), MRO supplies (2-4), and bearings (4-6). Mill steel is available in 4-8 weeks.

Philadelphia: Some electronic parts are out from 1982 lows—to these weekly waits: Power transformers (10-12), metal film and carbon comp resistors (6), double-sided PC boards (8-10), and solid-type tamtalum resistors (8-10). But large scale ICs are in (to 10-12). No change in most metals and fastener lines.

Pittsburgh: Half-ton and larger tin orders are out to 12 weeks. Basically unchanged (in weeks) are polyethylene and PVC plastics (4), mill quantities of copper products (6), standard steel drums (1), steel strapping (2-3), coil-coating paint (3), corrugated containers (2-3), folding boxes (4), and plastic packaging (3-4).

Leadtimes (in weeks)

STEEL	Now	Month ago	Six months ago
Sheet (Phil)	5	5	5
C-R Sheet (Chgo)	13	4½	4½
Plate (Phil)	4½	4½	4½
Plate (Chgo)	2	2	2
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5	5	5
H-R Bars (Chgo)	2	2	2
Cold-Drawn Bars (Phil)	6	6	12
Galvanized (LA)	4	4	3½
Galvanized (Chgo)	9	4½	4½
Structurals (Chgo)	2	2	2
Structurals (Hous)	17	17	17
Tubing (Phil)	19	19	19
Grey Iron Castings(LA)	12	9	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	7	7	7
Pipe, Carbon (Hous)	20	20	15
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	8	8½	9
ICs (Linear) (Phil)	11	12	16
Motors (Phil)	21	21	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	7	7	7
Relays (Chgo)	15	15	15
Resistors (Chgo)	10	10	10
Resistors, Wirebound (Phil)	10	10	10
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	2	2	2½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	1/5	1/5	1/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	1
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	3
Paint, Coil Coating (Pgh)	3	3	3
Paint, Maint. (Clev)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	2	2½	2
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	1	½	1
PVC Resin (Pgh)	4	4	4
Titanium Dioxide (LA)	1	1	1

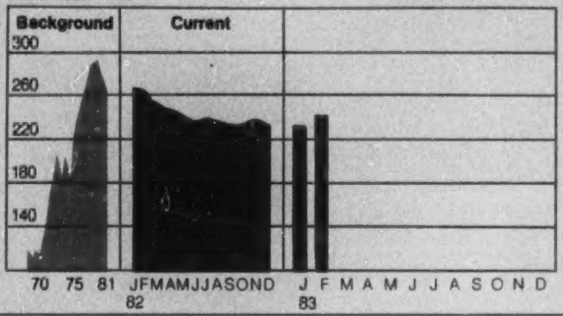
PACKAGING	Now	Month ago	Six months ago
Bags, Kraft (Pgh)	4	4	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	7	7	11
Cartons, Corrugated (Clev)	3	3	3
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	4½	4½	7
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	5	5	5
Shrink Film (Clev)	3	3	3
Drums, Fiber (Pgh)	1	1	3½
Drums, Steel, Std. (Pgh)	1	1	2½
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	6½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	9	7½	7½
Aluminum Plate (Chgo)	9	7	7
Aluminum Sheet (LA)	5½	5½	7
Aluminum Sheet (Chgo)	9	8	8
Brass Castings (LA)	8	9½	7
Brass Rods (Chgo)	2½	2½	2½
Brass Sheet (Chgo)	5	5	5
Brass Tube (Chgo)	9	9	9
Copper Fittings (LA)	4½	4½	3
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	4½	4½	6
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	4
Wire, Specialty (LA)	5	5	6
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	22	22	22
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	56	56	56
Compressors, Reciproc. (Hous)	45	45	45
Fasteners (Chgo)	½	½	½
Fasteners (LA)	8	8	10
Fasteners, Std. (Phil)	3½	3½	3½
Heat Exchangers, Carbon-alloy Steel (Hous)	30	30	32
Heat Exchangers, Hi-pressure (Hous)	43	43	43
Insulation Mat'l. (LA)	9	11	4
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1	1	1
Pumps (Hous)	41	41	41
Pumps (LA)	9	10	10
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	6	6	5
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	13	13	13
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month 241.3
Month before 232.1
Year ago 261.0

Index: 1967 = 100



Latest spot market prices

FERROUS METALS	Latest price	Previous month	Year ago
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	347.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	22.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	22.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	23.40
Steel, bars, dlvd. Phila., cwt., merchant quality	17.50	17.50	14.35
Steel, bars, Pitts, cwt.	17.50	17.50	14.35
Steel, bars, C.R., Pitts, cwt.	26.00	31.00	31.00
Steel, plates, Pitts., cwt.	25.75	24.25	24.25
Steel, plates, H.R., Pitts., cwt.	25.75	24.25	24.65
Steel, sheets, C.R., Detroit, cwt.	26.15	24.65	24.65
Steel, strip, C.R., Chi., cwt.	29.05	29.05	29.05
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.600	0.555	0.500
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	4.95	4.95	4.60
Brass, red, 85%, [sheet], lb.	1.29	1.26	1.19
Brass, yellow, [sheet], lb.	1.23	1.20	1.13
Cadmium, ton lots, lb.	1.00	1.00	1.40
Copper, electrolytic, wire bars, refd., lb.	0.82	0.79	0.77
Copper sheet, over 24 in., lb.	1.39	8 1.35	1.28
Lead, common, N.Y., lb.	0.210	0.205	0.270
Magnesium, pig ingot, [99.8%], lb.	1.34	1.34	1.34
Mercury, 20 fl. lots, N.Y., fl.	345.00	350.00	380.00
Molybdenum Climax Oxide/bags, lb.	4.40	4.40	8.50
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	10.31	13.90	7.80
Tin, Straights, N.Y., lb.	6.62	6.37	6.70
Zinc, Prime West, East St. Louis, lb.	0.380	0.400	0.410
Zinc, die casting alloy, No. 3, lb.	0.465	0.465	0.475
PAPER			
Bond paper, No. 1 sulfite, water marked, 20-lb., 4 cartons, cwt.	68.60	68.60	68.60
Gummed sealing tape, carton	15.70	15.70	15.70
Offset paper, No. 1 Grade	49.70	49.70	49.70
Folding boxboard, white clay coated 80 bright, ton	372.90	372.90	411.67
Wrapping paper, std. distribution cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	250.00	250.00	300.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.249	0.236	0.232
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	0.95	0.95	1.00
Cotton middling, 1", N.Y., lb.	0.647	0.611	0.612
Printcloth, 48", 80x80, N.Y., spot. yd.	0.600	0.610	0.700
Army duck, 37", 13 oz., yd.	1.60	1.60	1.70
Blended printcloth, 64", 78x54, yd.	0.67	0.66	0.70
20s combed yarns	1.68	1.68	1.73
Wool tops, N.Y., lb.	3.60	3.60	3.60

CHEMICALS	Latest price	Previous month	Year ago
Acrylonitrile, tanks, lb.	0.430	0.430	0.445
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	150.00	210.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.45	1.45	1.52
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.66	0.66	0.66
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	0.106	0.101	0.101
Glycerine, synthetic, tanks, lb.	0.730	0.730	0.805
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.715	0.715	0.715
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.255	0.265	0.420
Polyethylene resin, low density liner film grade (market price), lb.	0.280	0.275	0.290
Polypropylene, homopolymer grade (market price), lb.	0.37	0.37	0.36
Polystyrene, general purpose grade (market price) lb.	0.38	0.38	0.38
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.350	0.350	0.375
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	135.00	135.00	147.50
Sulphuric acid, 66%, commercial, tanks, ton	56.35	56.35	93.69
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.45	1.45	1.45
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	329.90	328.00	310.16
Lumber 2x2, pine, mbf, cl	318.40	311.60	283.17
Plywood, plyform, 3/4", msf, cl	540.30	539.95	581.60
Plywood, 5/8", msf, cl	350.70	340.65	333.60
Cement, bulk, ton, tl	62.57	63.18	62.23
Sand, ton, cl	5.93	5.92	5.98
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	45.64	45.93	45.42
Crushed stone, 1½", ton, cl	7.88	7.85	7.75
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.75	0.75	0.73
Gypsum sheathing, ½"x1"x8", msf, tl	160.36	158.15	154.68
Brick, common, per thousand, tl	172.95	172.35	172.85
Asphalt paving, AC-20	157.90	155.57	167.13
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.78	6.76	6.70
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	23.00	22.00	22.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	27.75	28.75	33.30
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.735	0.775	0.913
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.810	0.829	0.894
Heating oil, No. 2, Chi., bulk, gal.	0.725	0.770	0.860
Heating oil, No. 2, N.Y., bulk, gal.	0.798	0.828	0.926
Heavy fuel, PS 400, Los Angeles, rack, bbl.	24.50	25.30	23.75
Jet kerosene, gal.	0.770	0.830	0.900
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.450	0.450	0.410
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	78.00	67.00	84.00
Steel, No. 1, hvy., dlvd., Chi., ton	78.00	66.00	71.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.700	0.655	0.610
Copper, No. 2, East, wholesale buy, dlvd., lb.	0.595	0.580	0.545
Brass, red, East, wholesale buy, dlvd., lb.	0.660	0.615	0.570
Brass, yellow, East, wholesale buy, dlvd., lb.	0.360	0.350	0.360
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	0.310	0.275	0.280
Alum., mixed clip., E., wholesale buy, dlvd., lb.	0.330	0.295	0.290
Zinc, old, East, wholesale buy, dlvd., lb.	0.080	0.075	0.140
Lead, clean solids, East, wholesale buy, dlvd., lb.	0.115	0.115	0.150
Paper, No. 1 mixed, dlr., N.Y. ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	7.00	5.00	8.00
Paper, old corrug. box, dlr., N.Y., ton	6.00	4.00	7.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.10	0.11	0.08
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.11	0.11	0.14

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

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Transportation in the 80s: Higher costs, better service

Transportation buyers face a mixed bag for the rest of this decade: higher costs, but improved service, and fewer, but more competitive, suppliers. That is the key projection in a new study issued by the National Council of Physical Distribution Management.

To stay competitive in the changing transportation market, says the report, both shippers and receivers have several strategies available. Among them are a number of familiar purchasing methods: cost analysis and negotiation, longrange contracting, and concentration of business with a limited number of suppliers.

Among the specific findings of the research report:

- Most transportation modes will experience cost increases greater than the changes in the Producer Price Index in the 1980s (see table).
- Small shipment costs will increase at lower rates than those for air shipment.
- Railroads will tend to improve their cost positions in bulk and mass volume shipments.
- Major carriers will offer a broader range of services. Multimodal transportation companies will become more commonplace, but will not dominate the industry.
- Carriers will expand single line service markets and streamline operations through mergers, acquisitions, and divestitures. Shakeouts in each transportation mode will continue. There will be three to five national railway systems by 1990.
- Competition within and among modes will increase, and larger companies will boost their share of business within each mode.

Transportation services will increasingly be purchased through price and service contracts rather than tariffs.

Buyers' responses

The NCPDM research suggests a number of possible responses to these developments. Those common for all types of shipments include the following:

- Use more analytic and negotiating skills in buying transportation services.
- Stress the *management* of transportation, with emphasis on planning, budgeting and communication.
- Review all requirements to make sure premium transportation is used only when necessary.
- Place business with a limited number of carriers to obtain the best volume discounts.
- Consolidate shipments to build traffic volume.
- Negotiate more contracts to minimize uncertainties in service, equipment supply, rate escalation, and spot markets.
- Take another look at private trucking. Consider dropping the idea if empty mileage is more than 10-20%.

The NCPDM report also contains suggestions for managing specific categories of shipments. Examples:

Small shipments: Consolidate where possible. Use drop shipments into parcel carrier networks for medium-to-long-distances. Use drop-off specialists such as household goods carriers for medium or long-haul shipments greater than 5000 lbs, but less than a truckload. If small shipments can be pooled, use terminal distribution LTL specialists under aggregate tender agreements.

Volume nonbulk: Use rail contracts to reduce costs and insure service and equipment availability. Use private trucks for truckload shipments if service requirements are high and empty miles are less than 10-20%. For long-haul truckload shipments, use intermodal carriers or intermodal forwarders, agents, brokers, etc.

For information on the NCDPM report, which was prepared by Temple, Barker & Sloane, Inc., write the National Council of Physical Distribution Management, 2803 Butterfield Road, Oak Brook, IL 60521. ***PW***

TRANSPORTATION COST PROJECTIONS

Compound growth rates to 1990 (percent)

	Scenario I	Scenario II	[redacted]	Scenario IV	Scenario V
PPI	**8.5**	**8.5**	[redacted]	**8.5**	**8.5**
Small shipments					
Motor Carrier-LTL	9.3	8.4	[redacted]	6.7	7.1
Surface Small Parcel	9.1	8.7	[redacted]	7.8	8.1
Air-Small Parcel	10.2	9.6	[redacted]	8.8	8.5
Air-Combination Carrier	9.7	9.5	[redacted]	8.6	7.6
Volume Shipments					
Intermodal[1]	10.1	9.1	[redacted]	7.8	7.7
General Truckload	9.8	9.2	[redacted]	7.6	7.6
Private truck	9.7	9.1	[redacted]	7.5	7.7
Railcar Load	10.4	9.3	[redacted]	8.1	8.2
Bulk Truckload	9.5	9.6	[redacted]	8.5	8.7
Barge Tow	9.6	11.5	[redacted]	8.7	8.7
Mass Volume Shipments					
Rail Unit Train	10.4	9.6	[redacted]	8.8	8.2
Large Barge Tow	9.7	11.0	[redacted]	8.2	8.5
Oil Pipeline	5.9	5.8	[redacted]	5.5	4.6

Scenario

I-No productivity gains; no change in user fees other than changes already scheduled and inflation of existing fees.
II-Low productivity gains and high user fees.
III-Most likely level of productivity gains and user fees.
IV-High productivity gains and low user fees.
V-Most likely level of productivity gains and user fees if fuel increases at 50% of macro projection.

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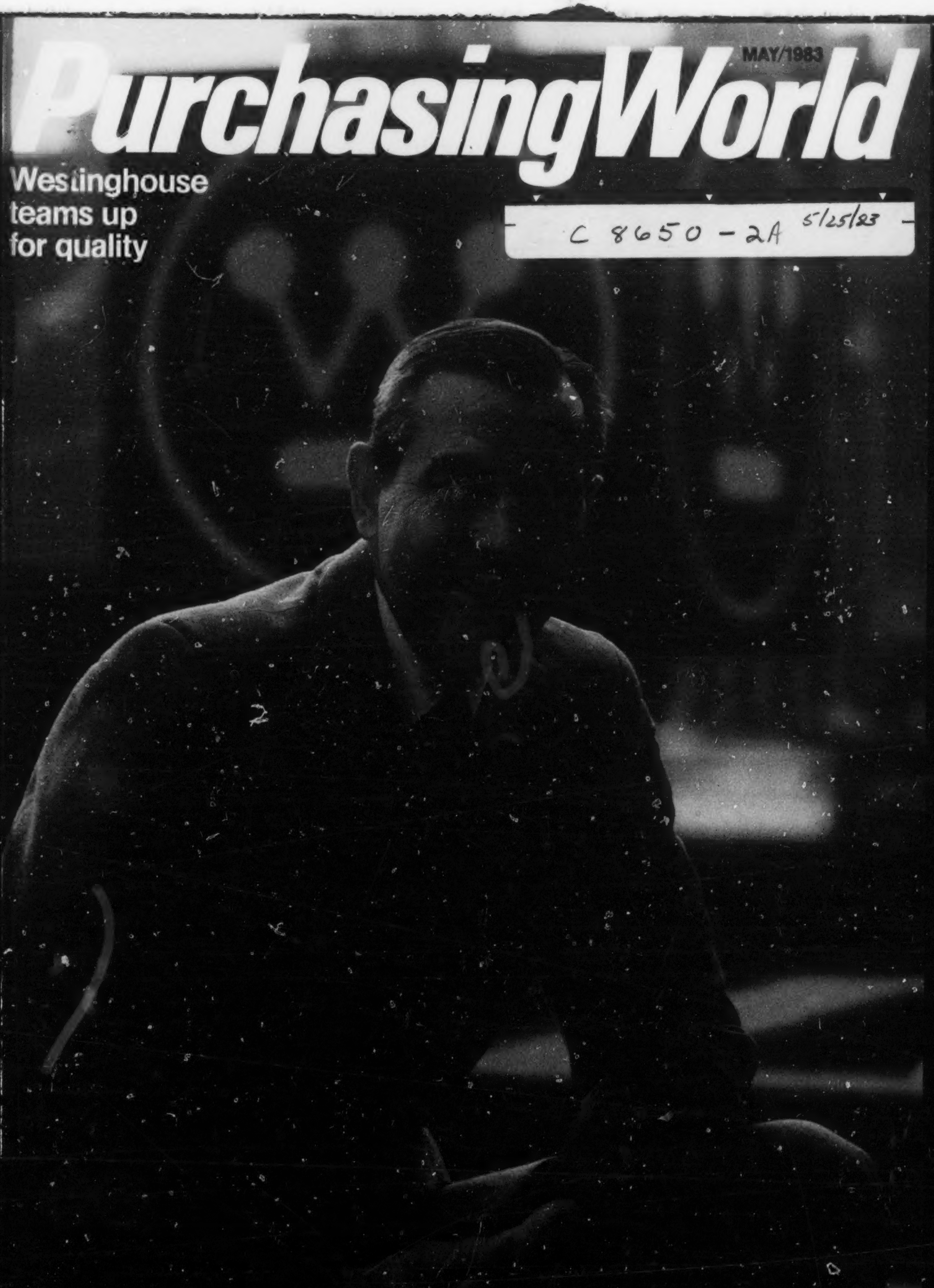
[1] Door-to-door service

PurchasingWorld

MAY/1983

Westinghouse teams up for quality

C 8650 - 2A 5/25/83



PurchasingWorld

Vol. 27, No. 5 - May 1983

Helping you manage the business of buying

6 Publisher's Memo

11 *PW* Predicts
All signs point to low inflation

19 Datatrak
Key economic trends 19
Current prices 21
Steel scene 24
Procurement status 26
Leadtimes 28
Spot market prices 32

36 Freight Newsbriefs*

48 Westinghouse teams up for quality and productivity
The use of expanded training programs at Westinghouse helps purchasing increase cost savings and improve productivity efforts.

55 Perkin-Elmer's flexible approach to purchasing
Managing a high-technology business calls for a flexible, responsive approach to procurement. Here's how Perkin-Elmer meets that need.

60 NAPM's new president: Leave drudgery to computers
With computerization, a completely paperless purchasing department is possible, says NAPM President-elect Frank P. Alcock, C.P.M.

62 '83 forecasters: 'Think for yourself!'
Want to improve your chances in ***PurchasingWorld's*** 1983 Crystal Ball Contest? Question things, says 1982's winner.

66 Low inflation should continue through 1985
While price averages will stay in bounds, there could be some wide variations on a product-by-product basis.

68 Inventory levels are satisfactory
In a recent survey, purchasing executives say that the inventory paring of the past year or so may be just about over. Now purchasing can maintain more constant inventory levels.

73 What is Kanban?
This Japanese concept may help improve materials flow at your firm. Here are basics that can help you decide.

88 Purchasing Law
Using the unconscionability argument

90 Negotiations
Program and project purchasing

92 Value Analysis
Better value, lower cost

94 Products

100 *PW* Perspective

* Metalworking issues

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PW PREDICTS

Robert S. Reichard, executive editor

All signs point to low inflation

All signs continue to point to the lowest inflation rate since 1972 when the GNP price deflator registered only a 4.2% advance.

Some of the credit, of course, has to go to falling petroleum tags. A recent DRI computer run suggests that the $5/barrel decline will mean the following 1983 energy tag reductions from what otherwise might have occurred had crude oil not dropped: gasoline (10½%), natural gas (5½%), coal (½%), and electricity (1%). The impact on overall industrial prices is also deemed significant—something slightly more than 2%.

But wages may play an even more important role. Hourly pay boosts this year are expected to run only about 5% ahead of last year—with the credit going to a combination of forces, including (1) weakened union clout, (2) substantially smaller cost-of-living adjustments, and (3) less rank-and-file pressure as wage boosts (while relatively low) now actually top the overall inflation rate. Add in a conservative 1-2% increase in worker efficiency, and the pay increase, in terms of unit labor costs, should only be 3-4%—again the lowest level in more than 10 years.

The still far-from-robust business recovery should also help keep a lid on tags. Few analysts, for example, see much more than a 4% increase in real GNP by yearend—well under the 5-7% rates during the initial stages of other recent recoveries.

Factory operating rates will be hard put to even approach the 75% level by yearend—not nearly high enough to generate any meaningful demand-pull pressure on prices. In any event, it usually takes an 80%-or-higher operating rate to put suppliers back in the driver's seat—and that's still at least 12 months away.

Add in such other basically deflationary factors as a continuing strong dollar, ample or more-than-ample food supplies, and lower interest rates—and it's easy to see why nobody is seriously worried about inflation.

Equally encouraging are early-1983 results. Industrial producer tags over the first quarter (when the recovery began) moved up less than 1%. Buyers also confirm continued softness. The latest NAPM business survey still shows more PMs experiencing declines than increases.

Moreover, the trend seems to be continuing. A Dun & Bradstreet survey of leading vendors finds that only 38% of the respondents expect April-June price levels to top a year ago—a figure that is virtually unchanged from the 36% reading of three months earlier.

Steel

Demand has improved, but it still leaves a lot to be desired (mills are still finding it hard to break out of the 55-60% operating-rate range). Sheet products are faring best. But at the other end of the spectrum, a pickup in the hard-hit tubular sector seems another 9-12 months off.

Price hikes are still

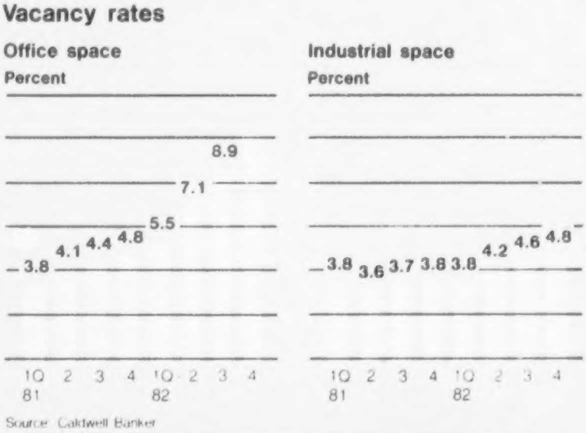
Vacancy rates

Press for bargains when buying or leasing new office or industrial space.

Reason: It's now basically an all-out buyers' market—with vacancy rates in both sectors climbing steadily (see chart). Due to the big building boom of the past few years, for example, more than 10% of the nation's office space is now empty.

The new figures, based on a survey by Caldwell Banker, a Los-Angeles-based real estate firm, also finds a rise in industrial space. Vacancies in this latter area, though well under the 10% office average, have jumped one percentage point over the past nine months into the close-to-5% range.

There's also considerable variation on a city-by-city basis. In the office space sphere, for example, here are some of the latest vacancy rate averages: Atlanta (19.4%), Chicago (8.3%), Dallas (10.0%), Denver (8.3%), Houston (5.3%), Kansas City (11.2%), Los Angeles (9.5%), New York midtown (4.3%), Miami (7.2%), Minneapolis-St. Paul (9.7%), Philadelphia (9.1%), Phoenix (11.0%), Portland, OR (16.9%), St. Louis (10.9%), San Francisco (5.7%), Seattle (8.4%), and Washington, D.C. (9.6%).



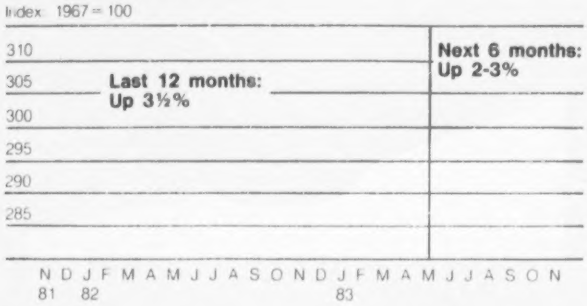
Vacancy rates

Source: Caldwell Banker

PW PREDICTS

Building materials

Building materials



CURRENT SITUATION: Markets are beginning to firm. Demand is up considerably, aided by (1) a warmer-than-normal winter, which permitted greater-than-seasonal building activity, and (2) improved housing starts (possibly rising 40-50% this year). Prices of materials, too, are up—with overall averages running 3-4% above last year's low point.

DEMAND: If interest rates drop another ½-1% over the spring and summer months, then **the outlook remains fairly bullish**—with an added assist coming from the beefing up of badly depleted distributor inventories. **Areas dependent on housing will fare best, offsetting continued softness in nonresidential and public construction.** Some of the anticipated 1983 increases: lumber (16%), flat glass (7%), cement (3%), brick and tile (20%), plumbing fixtures (13%), and gypsum products (10%).

SUPPLY: No major problems are seen. Reason: The construction pickup will be relatively modest compared to the levels of a few years back. The trends toward smaller homes and more attached units will also limit pressures on supply and keep rates low. Even cement (despite plant shutdowns) looks to have more-than-ample capacity—though some longterm doubts are being raised here inasmuch as little new capacity is scheduled to come onstream over the next few years.

PRICE OUTLOOK: Further advances seem certain—but they'll be modest. There's still more-than-ample capacity. Intermaterial competition is another factor. Production has become a bit more efficient, too. Maintenance of duty-free status for Canadian lumber could also be a price-rise inhibitor. All told, little more than a 2-3% overall increase is seen by fall—though a few areas such as lumber, building paper, and wiring products could sport higher nearterm annual rates of increase.

needed—despite the new labor contract which temporarily reduces labor costs by $1.50/hour. But they'll be hard to come by—given low operating rates and competitive infighting among both domestic and overseas sellers.

Look for a gradual narrowing of discounts—especially after midyear as demand slowly continues to improve.

Rubber

A scheduled 2-3½¢/lb increase in SBR could be in trouble. One reason: The 3¢/lb increase in butadiene (which sparked the upward move) has been shaved by more than 1¢/lb.

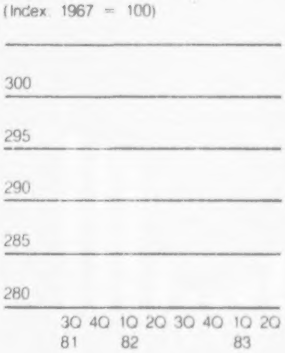
Also, competition remains keen in an industry that, even with an estimated 5-6% increase in demand this year (to 960,000 tons), will only be operating at 55% of its potential. Bucking the soft trend, however, is natural rubber where producer production curbs have helped drive tags up more than 25% over the past few months.

Plastic resins

A mixed bag here. Polypropylene remains depressed—with material said to be going in the low 37-39¢/lb range—some 8¢/lb off the official list. Polystyrene also remains in the doldrums, with the current 65-70% operating rate keeping quotes at or near the low 40¢/lb level.

On the other hand, polyvinyl chloride is a bit stronger as selling prices move up 2-4¢/lb from the under-34¢/lb levels which prevailed as recently as late 1982.

Plastic resins



Chlor-alkalis

Aided by better demand, producers have been able to boost off-list chlorine prices some $15-20/ton since late last year—bringing quotes into the $90-95/ton range for big volume buys. And further hikes are likely by summer.

But caustic soda remains in excess supply—suggesting further price declines from the already low $160-165/ton level (off significantly from the $225-250/ton readings of a year ago). Also soda ash—as high as $92/ton in early 1982—could drop another $2-4/ton from an already low $84/ton quote.

Paper products

Prices seem to be bottoming out in some sectors—with linerboard moving up some $20/ton (into the

$270/ton range). And there's talk of selective boosts in many white paper lines by midyear.

Also on the bullish side: Overall operating seems to be heading up and could well average out near the 89% level this year (versus only 85% in 1982). On the other hand, competition continues in tissue, newsprint, folding cartons, and grocery bags. New reductions in bleached softwood and hardwood pulp, too.

Computers

Competition continues to bring tags down—with new reductions noted for Apple, Xerox and IBM machines. The Apple III, for example drops 23%, with quotes for the 256K model down to $2695. Xerox, in turn, has knocked 26% off its basic 820 II model. Some IBM's meantime are off 13%.

And in yet another move, Tandy has unveiled a Japanese-made 24K RAM portable for only $999. All signs point to further declines by year-end as more and more models hit the market.

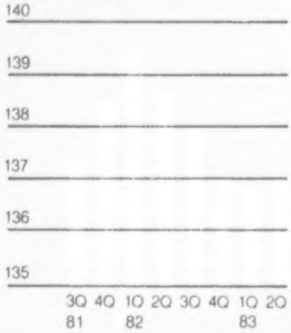
Machine tools

Look for some significant price boosts in Japanese models as Far Eastern producers, pressured by trade complaints, raise floor prices 10% for such items as machining centers (machines that perform a series of metal-cutting operations) and numerically controlled (N/C) lathes.

But it could take a few months before the full impact is felt here because the Japanese have a huge number of lower-priced tools already stocked in the U.S.

Textile mill products

(Index: Dec 1975 = 100)



Textiles

The new 6-25¢/lb boosts in polyester could be on shaky grounds. Reason: substantial industry overcapacity—plus the fact that the fiber has recently been selling for as much as 10¢/lb under list. Example: Standard 150-denier feeder yarns in recent months have gone for as little as 71-76¢/lb.

Equally significant, fabric makers—faced with a slow market, sagging prices, and a flow of cheap overseas material—are hardly likely to accept these polyester boosts without a fight.

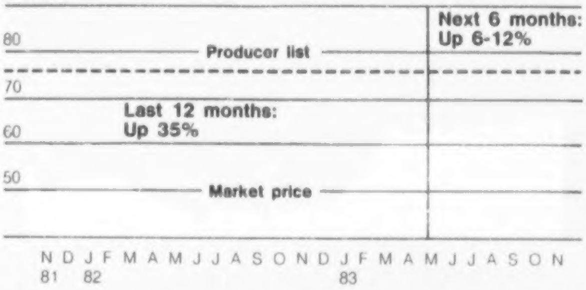
Zinc

Prices have stabilized. But there's still no indication of any major upward push—at least not over the next

Aluminum

Aluminum ingot

Cents/lb



CURRENT SITUATION: The light metal looks a lot more buoyant these days. Prodded by production cutbacks and a big jump in early 1983 orders, prices have been moving up on a broad front—**with merchant quotes, producer asking prices, and the LME all at or above the 60¢/lb level (ingot basis).** That's a hefty 30%-plus advance over late last year. Discounts on more highly fabricated lines have also been narrowing, and leadtimes have moved out to as much as 10 weeks.

DEMAND: The recent order spurt could be misleading—reflecting, to some extent, hedge buying rather than any big jump in consumption. Nevertheless, some industry estimates put 1983 shipments as high as 8% above last year. **Biggest gains will be in the construction and auto areas.** Little or no gains are seen for the aerospace and electrical equipment markets.

SUPPLY: The domestic industry continues to operate at under 60% of its potential. Free World operations are at the 75% level. **Then too, inventories remain high** despite some recent drawdowns. Domestic stocks still top six months' supply at current shipment rates. But longer run, there should be better balance, since Free World capacity looks to remain relatively unchanged through 1986.

PRICE OUTLOOK: Further advances are likely. But the rate of increase will be a lot slower than the past few months. Reasons: (1) nearterm ordering will be slowing a bit, (2) inventory overhang is still large, and (3) most producers are now back in the black (60¢/lb is the breakeven point). All this suggests tags (ingot basis) will be **hard put to top the 70¢/lb mark over the next six months.** But beyond that, brace for another big advance—as quotes finally move above the official 76¢/lb list, and fabricated items post similar gains.

few months. Any major demand increase, for example, will have to wait on improved auto sales.

Hand-to-mouth buying on the part of users is also helping to keep a lid on tags. But by fall, a gradually improving general business picture should have some firming impact on prices—with a fair chance of High Grade zinc rising into the mid-40s range as the year closes.

Molybdenum

Dealer oxide continues to move up. Ditto, producer prices. And the trend is likely to continue on the prospect of better market balance. Specifically, curtailed global production will drop new suppliers to near 136 million lb this year. That's 34 million lb under projected demand—enough to permit some producer stock liquidation.

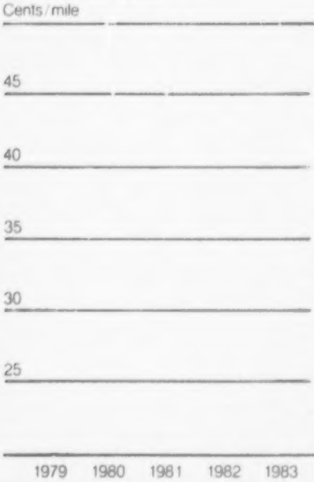
Car driving costs

Good news for fleet car administrators. If interest rates and gasoline continue at anywhere near their current levels, 1983 could see the first decline in auto ownership and operating costs since 1971.

That's how Hertz analysts see it. The firm also has some good news about the past year—with the increase in driving costs rising by less than 3%—the smallest such advance in years and a welcome change from the double-digit boosts over the past decade. The average compact car (driven 10,000 miles per year and held for five years) cost some 44.67¢/mile to drive last year. Comparable costs for other size cars: subcompact (34.18¢), mid-size (49.02¢), intermediate (50.69¢), and full-size (52.31¢).

How car driving costs shape up

The overall trend*



City-by-city variation

City	Percent above or below national average of 44.67¢ per mile
Los Angeles	+27.8
New York	+25.5
San Francisco	+21.6
Miami	+12.0
Chicago	+11.5
Seattle	+7.3
St. Louis	+6.6
Denver	+5.2
San Diego	+3.9
Boston	+3.7
Houston	+2.1
Milwaukee	+2.1
Minneapolis	+2.0
Cleveland	+1.5
Pittsburgh	+0.2
Washington D.C.	-2.1
Cincinnati	-2.3
Dallas	-3.5
Atlanta	-5.6
Detroit	-6.7
20 city average	+5.7

*Compact driven 10,000 miles/year and held for 5 years.

Source: Hertz, *PW* estimates

Copper

Markets are taking a breather after an early 1983 price runup. In any event, further advances should be slow coming—unless, of course, U.S. mines are struck this summer. Another price rise inhibitor: High exchange inventories plus the fact that global output continues to top demand.

Then, too, domestic 1983 growth looks fairly anemic (only 4% is seen)—not enough to return demand to even 1981 levels. In short, barring a long strike, the red metal will be lucky to approach the 90¢/lb level by next fall.

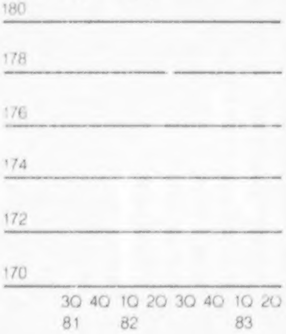
Electronic components

A few signs of firming here. Motorola's replacement of suspect 64K RAMs, for example, could firm these prices.

Tags are also advancing for low-power Schottky devices as demand picks up at a time when considerable capacity has been shut down. Indeed, the going price here has moved up from a late-1982 low of 9¢/gate to something near 12-13¢/gate.

Other signs of a strengthening market: (1) New semiconductor orders have jumped more than 16% over the past three months, and (2) the book-to-bill rate is up to 117—signifying that orders now top sales by 17%.

Electronic components

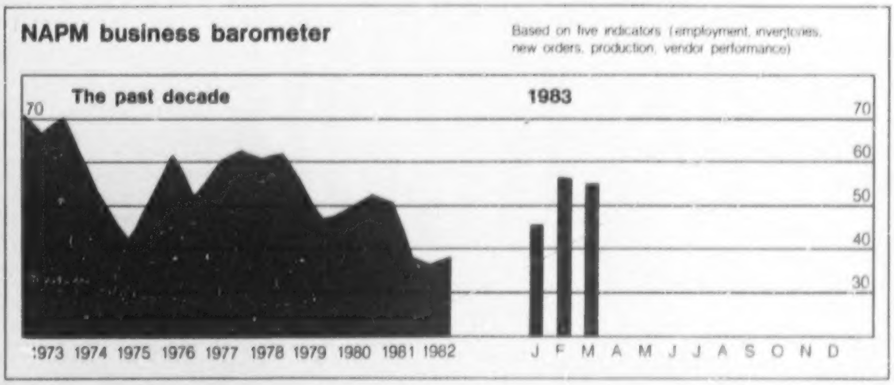


Lead

Prices are likely to remain in the soft low-20s range—less than half the 45¢/lb peak hit back in 1981. One of the basic problems: poor demand from battery makers, with even the most optimistic projections calling for only a 3% rise in the number of units sold.

Newer, lighter-weight batteries aren't calculated to help the metal. Neither are still-rising producer inventories. Even with some scattered strikes, there should be enough to go around with little upward pressure on prices. ***PW***

BUSINESS DATATRAK



NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)

KEY ECONOMIC TRENDS

Rate of recovery shows signs of slowing

Things are still moving up—but not at quite the brisk pace of the first three months of the year.

One of the big problems is interest rates—with nearly all economists now agreed that the cost of money will have to come down another percentage point or two if the recovery is to maintain its recent forward momentum.

There's also pretty much of a consensus that the budget deficit will have to be pared if gains are to be maintained.

Leading indicators

The behavior of leading indicators would also seem to support uncertainty about the rate of business gain in the months immediately ahead. Take the widely monitored NAPM Business Barometer. True, it remains above the neutral 50 mark (chart above). But it has actually dropped fractionally over the latest reported month—hardly the harbinger of a strong business upturn.

A similar good-but-not-great signal comes from Uncle Sam's index of sensitive leading indicators. That's not to say this barometer has topped out. But the gains are nowhere near the 3% and higher rates noted just a few short months ago.

Specific barometers

Zero in on some of the more specific business barometers and the picture is much the same. Industrial distributor sales, which is a time-tested MRO measure and hence an indicator on what's ahead on the grass roots factory level, continues to climb. But the figures remain well under yearago levels. If nothing else, this fact suggests that few firms are preparing themselves for full-speed-production.

The capital equipment order trend is also far from robust—especially in the bellwether machine tool area. As the middle chart alongside indicates, tool bookings ran at just under the $100 million/month level during the first quarter—more than 50% under a year earlier.

The point to keep in mind: These orders are generally symptomatic of overall plant and equipment trends. As such, they would seem to confirm earlier projections that capital outlays will be off this year.

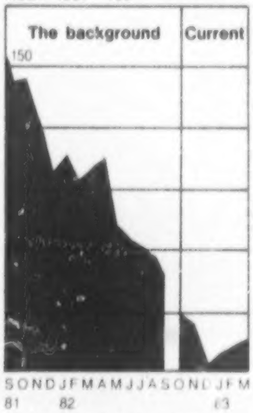
Hesitancy is also apparent on the consumer front. Car sales, for instance, have just not taken off as expected—with first quarter purchases of domestic vehicles still running at the low 6-million-unit annual rate.

Then, too, there is the disappointing trade trend. Hurt by a strong dollar, the deficit has been running at a $43 billion annual rate—with low exports and rising imports partially offsetting gains in some

Leading indicators

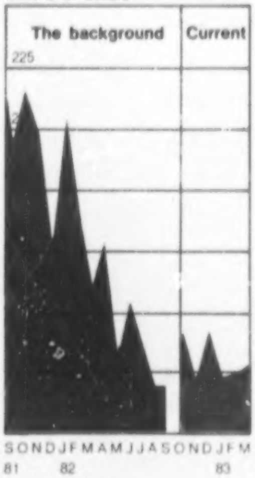
1. Industrial distributor sales

Index: 1967 = 100



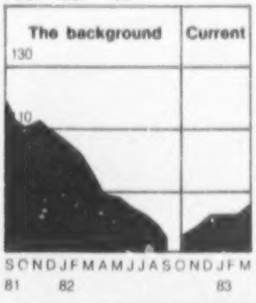
2. Machine tool orders

Millions of dollars



3. Help wanted

Index: 1967 = 100



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other GNP sectors.

The absence of any broadly-based upward surge is also showing up in employment statistics. Jobless rates refuse to drop under the 10% level. And judging from the relatively unchanged level of help-wanted advertisements, it's likely to remain in this range for another few months.

Dun & Bradstreet survey of expectations

The nation's top corporate executives are turning a lot more bullish these days.

Lest there be any doubt on this score, take a look at the results of Dun & Bradstreet's latest Business Expectation survey (see chart).

Some two out of three manufacturers now anticipate an order pickup over the second quarter—with an almost-as-large 58% also projecting a rise in net earnings.

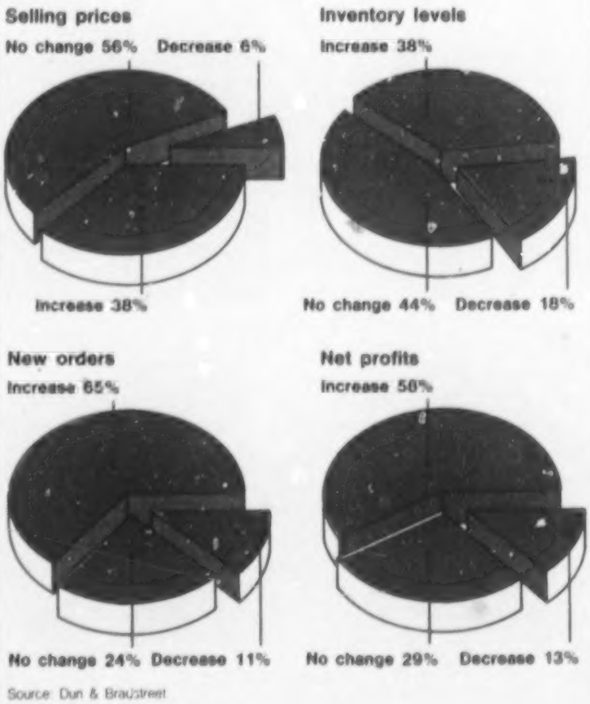
Even more significant, these expectations are well above those recorded in the previous quarter when the numbers expecting increases in orders and profits came to only 47% and 44%, respectively.

More good news

Inventory plans also suggest better days ahead. Specifically, about 38% of the respondents are now targeting for stock increases (versus only 18% who see further cuts). The comparable figures three months ago: increasing—27%, and decreasing—25%.

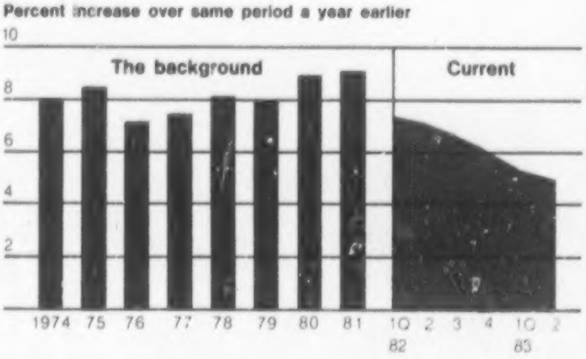
Still another encouraging sign, at least as far as industrial buyers are concerned: There will be little or no price acceleration. Again the survey figures tell the story—with the 38% anticipating price increases little changed from the 36% reading of the previous quarter.

How vendors view the second quarter



Source: Dun & Bradstreet

Pay boosts slow down



Source: Bureau of Labor Statistics, *PW* estimates

Wage cost trends look good

Relatively restrained pay boosts continue to point to reduced overall cost pressure on prices.

Newly released government figures, for example, suggest that hourly wage hikes (private, nonfarm) are running only about 5% ahead of a year ago. That's only a little more than half the 9%-or-so rates that prevailed as recently as 1980 and 1981 (see chart). Indeed, it's the lowest level in nearly a decade.

More impórtant—judging from the current pattern of settlements, this rate will persist for at least another few quarters—and maybe even into early 1983.

Some reasons why

Behind the slowdown: (1) the relatively poor bargaining position of labor (unemployment is still mired in the double-digit range), (2) the realization on the part of union leaders that American industry has to become more competitive, and (3) reduced cost-of-living pressures on the rank and file. Real wages, for example, have been rising of late—albeit at a very modest pace.

Reduced consumer price hikes are also limiting the impact of cost-of-living adjustments. In fact, one source figures that if the cost of living continues to go up at the same 4% rate as last year, pay increases in some industries will average only about half to two-thirds as much as negotiators had expected when they initially inked their current contracts.

CURRENT PRICES

Little increase seen in prices

The lull in industrial producer tags is continuing—despite the modest pickup in demand noted over the past few months.

To be sure, overall averages have inched up. But the total first quarter advance doesn't come to much more than 1%—with little indication of any acceleration over the April-June period.

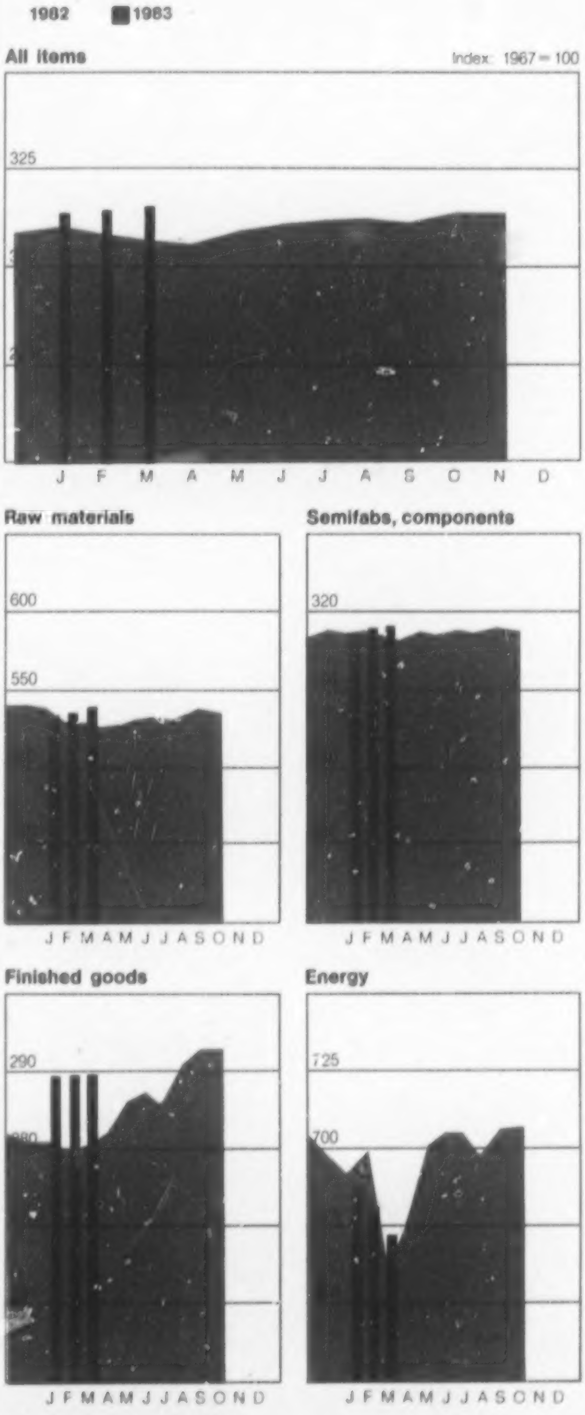
Even normally volatile raw materials haven't been all that buoyant of late. Although some nonferrous metals (notably copper and aluminum) posted some good-sized advances in January and February, they've now tended to stabilize.

Steel, too, is having difficulties in boosting prices. In fact, it may not be until

This month's breakdown

	Latest level (Feb.)	% change from: Month ago	Year ago
Bearings	331.2	0.1	2.9
Bolts, nuts, etc.	268.8	-0.2	-0.1
Chemicals, inorganic	301.9	0.1	-3.0
Chemicals, organic	359.4	-0.4	-7.1
Concrete products	299.5	0.3	1.2
Corrugated cartons	237.9	-0.3	-3.4
Cutting tools, small	277.2	0.2	1.4
Electrical instruments	268.1	1.8	8.8
Electric lamps (bulbs)	304.8	1.9	9.0
Electronic components	180.2	0.8	2.9
Fans and blowers	336.5	0.0	0.8
Foundry and forge products	346.8	0.2	0.7
Fuel oil (residual)	1104.5	-2.0	-6.2
Furniture, commercial	282.6	0.4	4.2
Gasoline	603.8	-4.2	-13.9
Glass, flat	229.7	0.0	6.2
Glass containers	355.8	-0.7	1.0
Gypsum products	263.4	1.4	3.3
Hand tools	344.2	0.3	3.2
Hand tools, power driven	220.7	0.2	0.7
Industrial furnaces	356.9	0.0	4.2
Integrating and measuring instruments	220.5	0.7	6.3
Internal combustion engines	335.5	0.1	4.9
Lubricating oil	818.5	-0.2	-7.8
Lumber millwork	300.5	2.3	7.9
Material handling equipment	285.3	-0.5	-0.7
Metal containers	330.3	1.0	1.3
Metal mill shapes (nonferrous)	310.3	0.8	1.8
Metal tanks	308.2	0.1	-2.1
Motors and generators	319.9	0.7	3.9
Motor trucks (10,000 lb and under)	317.5	0.0	6.8
Office and store equipment	154.1	-0.2	2.5
Paperboard	244.0	-0.2	-6.7
Paper boxes and shipping containers	247.5	-0.2	-1.3
Paper office supplies	226.8	0.0	2.2
Paint	265.1	0.0	2.4
Precision measuring tools	243.3	0.5	3.2
Pumps and compressors	349.4	-0.1	1.2
Refractories	338.2	0.0	0.9
Rubber belts and belting	328.0	0.3	3.4
Scales and balances	225.6	-1.0	0.7
Steel products	351.8	2.4	0.4
Switchgear	263.8	0.6	1.0
Textiles, synthetic fibers	155.4	-1.9	-4.8
Textiles, gray fabrics	144.4	-0.3	-2.0
Tires and tubes	250.4	-3.4	-2.5
Transformers and power regulators	223.5	1.5	0.9
Welding equipment	274.1	0.2	0.7
Wire and cable	205.9	2.0	0.1

Industrial prices at a glance



All items

Raw materials

Semifabs, components

Finished goods

Energy

Source: Bureau of Labor Statistics

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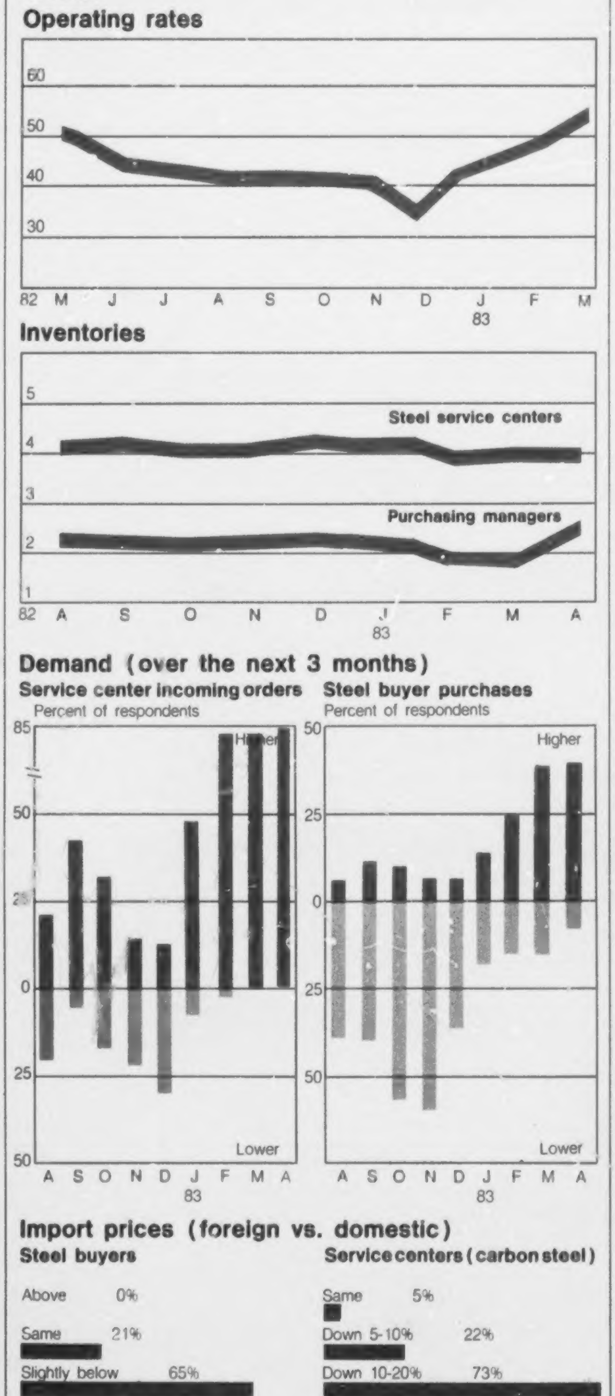
Steel



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

summer or early fall that some of the big 20% and 30% discounts currently being reported really begin to narrow significantly.

The story is much the same for chemicals and plastics. True, there have been some increases from late 1982 levels. But the hikes, by and large, have been quite modest. And in some instances they have washed out as overcapacity continues to plague this sector.

Restraint is also noted in the moderately "hot" building material sector. Indeed, even if you factor in firming lumber prices, the increase over the next six months isn't likely to be more than 2-3%.

Machinery tags are also marking time as the capital spending lull continues. About the only upward movement here will be in Japanese machine tools—with the advance forced more by U.S. protectionist pressure than by any really meaningful uptick in demand.

STEEL SCENE

Service centers betting on gains

The depressed steel industry is slowly beginning to pick itself off the floor.

Nearly three out of four distributors responding to the latest Steel Service Center Institute (SSCI) survey, for example, now say business is better than it was just a few months ago. And only a miniscule 3% report deterioration.

This positive development, observes SCCI president, Andrew G. Sharkey, doesn't appear to be limited to any one region. He adds that while last month the most optimistic companies were in the Atlantic region, this month the most glowing expectations are centered on the West Coast—with the central states reporting the greatest improvement in shipping levels.

But the overall bullishness is based on more than recent shipment increases. Sharkey, for example, says that there has been "a sharp feeling that if their customers win half the work that is being bid, things will pick up substantially."

No wonder then that most distributors seem to be betting on continuing gains. Specifically, an overwhelming 85% of the distributors now see increased orders over the next three months—with not one single center anticipating declines.

Buyers' outlook

Zero in on steel buyers, and the picture is much the same. Some half of PMs queried in the latest NAPM steel outlook survey look for an increase in their own firms' order books over the next three months—far outweighing the fractional 3% who fear further contraction.

Here, too, this bullishness is expected to be translated into bigger steel orders. Some 42% of the buyers plan on boosting their receipts of the metal over the next few months—the highest such percentage in years.

Ample supplies

Most of these increases, however, look to be quite modest. As such, there's little or no worry about supplies over the coming months—or even any concern about significant stretchouts in leadtimes.

Current, low, industry operating rates may also be a factor behind this complacency. The American Iron and Steel Institute, for example, still reports operating rates in the 55-60% range.

Low-priced imports

The still-hefty influx of imports also would seem to confirm the basically "no sweat" supply situation envisioned by virtually all service centers and steel buyers. Both groups, for instance, cite projections calling for as much as 15 million tons of imported metal this year.

Moreover, this figure could well turn out to be a bit conservative, if reports of current overseas bargains are anywhere near correct. Again the surveys tell the story. Specifically, nearly three out of four service centers now report that foreign carbon steel carries a price break of 10-20%.

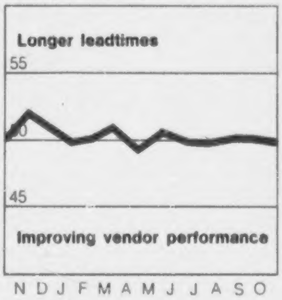
True, only 37% of these same distributors note 10-20% price breaks on stainless. But this is being counterbalanced by the fact that an additional 7% find that going foreign nets them a price advantage in excess of 20%.

The NAPM buying survey (which lumps all types of steel together) further confirms the continuing import advantage.

Monthly procurement status report

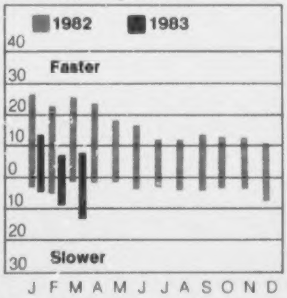
Leadtime index

A 'diffusion' index based on 158 key commodities. Above '50' indicates a tendency for leadtimes to stretch out. Below '50' suggests improving vendor performance.

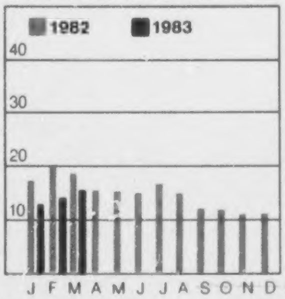


Delivery performance

Percent reporting deliveries

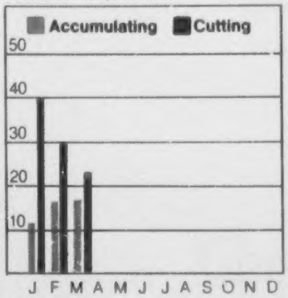


Forward commitments



Inventory strategy

Percent of respondents



Source: NAPM

PROCUREMENT STATUS

Unused capacity keeps leads short

The modest early-1983 business pickup isn't having very much impact on leadtimes—at least not as far as overall averages are concerned.

With more-than-ample capacity, vendors are keeping pace with the slight uptick in orders. Indeed, the average wait (as measured by ***Purchasing-World***'s exclusive leadtime index) has actually declined over the past month. This key barometer of vendor performance now registers a 49—one percentage point under the neutral 50 mark.

That's not to say, of course, that everything has remained unchanged or dropped a bit. Aluminum deliveries in some areas, for example, have stretched a bit. And the same is true of certain electronic components. But these are the exceptions, not the rule.

Even NAPM's speed-of-delivery survey suggests pretty much the same situation. True, a few more are reporting slower deliveries. But the key factor to keep in mind here is that four out of every five still report no change from the previous month's levels.

One thing for sure, few seem concerned enough to start increasing inventories. Indeed, as of the latest report, more buyers were still paring than were adding to their overall holdings, though the gap between these two series was beginning to narrow.

Then, too, only about 15% of surveyed PMs were committing 90 days or more in advance for production materials—a barely perceptible rise from the 13-14% levels of the two previous months. Contrast that to early 1981 when the comparable figures were in the 25-30% range.

In short, no one seems worried. As one purchasing executive put it, "It looks like clear sailing for at least another 3-6 months—barring, of course, a sudden spurt in demand, which we just don't see at this time."

Leadtimes and availability

Chicago: Small changes both up and down here. Stretching out to these new weekly leads are corrugated (1-3), surfactants (1), brass and copper rods (4), and sanded plywood (2-3). Edging lower, however, are shrink film (4), polyethylene (3-4), copper and brass sheet (4), copper and brass tube (5), and softwood framing (2).

Cleveland: Pretty much a repeat of last month, with only cold-finished aluminum in fractionally (to 7-8 weeks). Other typical waits (in weeks): corrugated (3), folding boxes (4), 2-ply fiber drums (2), paint (2-3), polyethylene and PVC resins (2), alloying material (on demand), lumber and plywood (3), strapping (2-3).

Los Angeles: Somewhat speedier deliveries (in weeks) for grey iron castings (8-10), brass castings (7-8), insulation materials (8), rubber hose (4-6), fasteners (4), and custom seals and gaskets (7). But out slightly are aluminum sheet (6-7), stainless steel (6), paints (4-5), and natural rubber (13).

BUSINESS DATATRAK

Houston: Some changes in long-leadtime items, with these waits (in months): centrifugal compressors (6-14), reciprocating compressors (6-12), shop-fabricated carbon steel pipe (2-4), shop-fabricated alloy pipe (4-7), large cast steel valves (4-12), steam turbines (12-14), and heavy-wall reactors (10-14).

Philadelphia: Scattered small reductions to these weekly waits: standard fasteners (2), standard pumps and valves (10), aluminum extrusions (8-10), die castings (6-8), molded plastic parts (8). But no changes in stainless bar (3-6), corrugated (2-3), plastic sheet (6-8), and steel strapping (1-1½).

Pittsburgh: Multiwall paper bags are out a bit (to 6 weeks). Ditto, laminating paper (3-7). But corrugated has come in (to 3-4). Unchanged are plastic bags (3-4), all types of drums (1), steel strapping (2-3), coil coating paint (1), polyethylene and PVC resins (4), alloying materials (2), tin (3-7), and copper products (6).

Leadtimes (in weeks)

STEEL	Now	Month ago	Six months ago
Sheet (Phil)	5	5	5
C-R Sheet (Chgo)	13	13	4½
Plate (Phil)	4½	4½	4½
Plate (Chgo)	2	2	2
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5	5	5
H-R Bars (Chgo)	2	2	2
Cold-Drawn Bars (Phil)	6	6	6
Galvanized (LA)	4	4	3½
Galvanized (Chgo)	9	9	4½
Structurals (Chgo)	2	2	2
Structurals (Hous)	17	17	17
Tubing (Phil)	19	19	19
Grey Iron Castings(LA)	9	12	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	7	7	7
Pipe, Carbon (Hous)	13	20	26
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	8	8	9
ICs (Linear) (Phil)	11	11	16
Motors (Phil)	21	21	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	7	7	7
Relays (Chgo)	15	15	15
Resistors (Chgo)	10	10	10
Resistors, Wirebound (Phil)	10	10	10
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	2	2	2
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	I/5	I/5	I/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	1
Naphthalene (Chgo)	2	2	2
Paint (LA)	4½	4	3½
Paint, Coil Coating (Pgh)	3	3	3
Paint, Maint. (Clev)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	2	2	2
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	1	1	1
PVC Resin (Pgh)	4	4	4
Titanium Dioxide (LA)	1	1	1

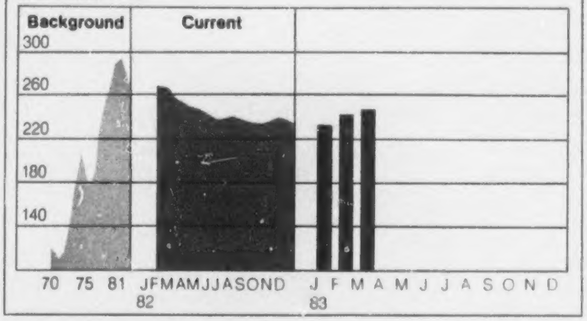
PACKAGING	Now	Month ago	Six months ago
Bags, Kraft (Pgh)	4	4	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	4½	11
Cartons, Corrugated (Clev)	3	3	3
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	4½	7
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	4	5	5
Shrink Film (Clev)	3	3	3
Drums, Fiber (Pgh)	1	1	3½
Drums, Steel, Std. (Pgh)	1	1	2½
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	6½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	4	4	4
NON-FERROUS			
Aluminum Coil (Chgo)	9	9	7½
Aluminum Plate (Chgo)	9	9	7
Aluminum Sheet (LA)	6½	5½	7
Aluminum Sheet (Chgo)	9	9	8
Brass Castings (LA)	7½	8½	7
Brass Rods (Chgo)	4	2½	2½
Brass Sheet (Chgo)	4	5	5
Brass Tube (Chgo)	5	9	9
Copper Fittings (LA)	5½	4½	3
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	6	4½	3½
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	3
Wire, Specialty (LA)	5	5	6
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	22	22	22
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	56	56	56
Compressors, Reciproc. (Hous)	39	45	45
Fasteners (Chgo)	½	½	½
Fasteners (LA)	4	8	10
Fasteners, Std. (Phil)	3½	3½	3½
Heat Exchangers, Carbon-alloy Steel (Hous)	30	30	32
Heat Exchangers, Hi-pressure (Hous)	43	43	43
Insulation Mat'l. (LA)	8	9	4
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	I	1	1
Pumps (Hous)	4I	4I	4I
Pumps (LA)	9	9	10
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	5	6	5
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	8	13	13
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month	248.0
Month before	241.3
Year ago	254.5

Index: 1967 = 100



Latest spot market prices

FERROUS METALS	Latest price	Previous month	Year ago
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	347.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	22.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	22.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	23.40
Steel, bars, dlvd. Phila., cwt., merchant quality	17.50	17.50	14.35
Steel, bars, Pitts, cwt.	17.50	17.50	14.35
Steel, bars, C.R., Pitts, cwt.	26.00	26.00	31.00
Steel, plates, Pitts., cwt.	25.75	25.75	24.25
Steel, plates, H.R., Pitts., cwt.	25.75	25.75	24.25
Steel, sheets, C.R., Detroit, cwt.	26.15	26.15	24.65
Steel, strip, C.R., Chi., cwt.	29.05	29.05	29.05
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65

NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.63	0.60	0.48
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	4.95	4.95	4.60
Brass, red, 85%, [sheet], lb.	1.28	1.29	1.18
Brass, yellow, [sheet], lb.	1.22	1.23	1.12
Cadmium, ton lots, lb.	1.00	1.00	1.10
Copper, electrolytic, wire bars, refd., lb.	0.80	0.82	0.75
Copper sheet, over 24 in., lb.	1.37	1.38	1.27
Lead, common, N.Y., lb.	0.21	0.21	0.26
Magnesium, pig ingot, [99.8%], lb.	1.34	1.34	1.34
Mercury, 20 fl. lots, N.Y., fl.	330.00	345.00	390.00
Molybdenum Climax Oxide/bags, lb.	4.65	4.40	8.50
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	11.24	10.31	7.07
Tin, Straights, N.Y., lb.	6.90	6.62	6.57
Zinc, Prime West, East St. Louis, lb.	0.38	0.38	0.35
Zinc, die casting alloy, No. 3, lb.	0.465	0.465	0.445

PAPER			
Bond paper, No. 1 sulfite, water marked, 20-lb., 4 cartons, cwt.	68.60	68.60	68.60
Gummed sealing tape, carton	15.70	15.70	15.70
Offset paper, No. 1 Grade	49.70	49.70	49.70
Folding boxboard, white clay coated 80 bright, ton	372.90	372.90	404.86
Wrapping paper, std. distribution cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	270.00	250.00	300.00

TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.269	0.249	0.245
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	0.95	0.95	1.00
Cotton middling, 1", N.Y., lb.	0.658	0.647	0.629
Printcloth, 48", 80x80, N.Y., spot. yd.	0.57	0.60	0.68
Army duck, 37", 13 oz., yd.	1.60	1.60	1.70
Blended printcloth, 64", 78x54, yd.	0.670	0.670	0.625
20s combed yarns	1.68	1.68	1.72
Wool tops, N.Y., lb.	3.60	3.60	3.60

CHEMICALS	Latest price	Previous month	Year ago
Acrylonitrile, tanks, lb.	0.43	0.43	0.46
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	150.00	150.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.46	1.45	1.52
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.66	0.66	0.66
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	0.106	0.106	0.101
Glycerine, synthetic, tanks, lb.	0.730	0.730	0.805
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.715	0.715	0.715
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.255	0.255	0.420
Polyethylene resin, low density liner film grade (market price), lb.	0.30	0.28	0.29
Polypropylene, homopolymer grade (market price), lb.	0.37	0.37	0.38
Polystyrene, general purpose grade (market price) lb.	0.39	0.38	0.38
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.350	0.350	0.375
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	135.00	135.00	147.50
Sulphuric acid, 66%, commercial, tanks, ton	56.35	56.35	93.69
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.42	1.45	1.45

BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	321.45	329.90	305.49
Lumber 2x2, pine, mbf, cl	319.10	318.40	281.23
Plywood, plyform, 3/4", msf, cl	541.95	540.30	580.05
Plywood, 5/8", msf, cl	351.05	350.70	334.88
Cement, bulk, ton, tl	62.34	62.57	62.21
Sand, ton, cl	5.94	5.93	6.02
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	45.84	45.64	45.72
Crushed stone, 1½", ton, cl	7.88	7.88	7.75
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.75	0.75	0.74
Gypsum sheathing, ½"x1"x8", msf, tl	61.51	160.36	154.68
Brick, common, per thousand, tl	173.55	172.95	173.00
Asphalt paving, AC-20	157.27	155.91	165.04
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.78	6.78	6.72

FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	23.00	23.00	23.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	27.75	27.75	31.30
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.755	0.735	0.880
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.826	0.810	0.835
Heating oil, No. 2, Chi., bulk, gal.	0.730	0.725	0.805
Heating oil, No. 2, N.Y., bulk, gal.	0.778	0.798	0.883
Heavy fuel, PS 400, Los Angeles, rack, bbl.	24.10	24.50	23.25
Jet kerosene, gal.	0.775	0.770	0.870
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.465	0.450	0.340

SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	73.00	78.00	74.00
Steel, No. 1, hvy., dlvd., Chi., ton	73.00	78.00	63.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.690	0.700	0.593
Copper, No. 2, East, wholesale buy, dlvd., lb.	0.600	0.595	0.523
Brass, red, East, wholesale buy, dlvd., lb.	0.65	0.66	0.55
Brass, yellow, East, wholesale buy, dlvd., lb.	0.36	0.36	0.35
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	0.325	0.310	0.260
Alum., mixed clip., E., wholesale buy, dlvd., lb.	0.34	0.33	0.27
Zinc, old, East, wholesale buy, dlvd., lb.	0.08	0.08	0.13
Lead, clean solids, East, wholesale buy, dlvd., lb.	0.120	0.115	0.150
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	10.00	7.00	8.00
Paper, old corrug. box, dlr., N.Y., ton	10.00	6.00	7.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.10	0.10	0.08
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.115	0.110	0.130

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Industrial price forecast

Low inflation should continue through 1985

It's beginning to look like a tolerably good year—with a fairly low rate of inflation and a gradually accelerating GNP curve. And the outlook through 1985 is for less-than-double-digit inflation.

A new Data Resources, Inc. (DRI) computer readout, for example, suggests that industrial wholesale prices will rise only about 4.8% this year. While above last year's low 2.7% advance (see graph), it's remarkably low considering the cost pressures faced by major suppliers.

As for real growth, projected advances run in the 1% range at annual rate—enough to push the 1983 overall GNP average up some 1.6% from last year's depressed levels.

One reason for the continuing price restraint: still-low factory utilization rates. Indeed, if DRI projections are correct, it may not be until 1985 that this bellwether indicator of demand pressures reaches even the 80% level.

Labor cost pressures are also forecast to remain relatively low. Private nonfarm pay hikes, for example, are expected to average only 5.8% this year—and only slightly higher 6.2% and 6.4% levels in 1984 and 1985.

Taken in combination, these factors suggest that inflation rates will remain in the single-digit range through 1984 and 1985—at least as far as overall averages are concerned. DRI's pertinent industrial wholesale price projections are 7.4% for 1984 and 7.6% for 1985. And the forecasted GNP price deflator increases are 1-2 percentage points under those levels.

What makes these latter increases so remarkable is that they will be occuring at a time of increasingly strong demand. Real GNP over 1984 and 1985 will be moving up at 4.5% and 4.3% rates, respectively. And even bigger 8.0% and 6.1% jumps in industrial production are seen over the same time span.

But there is one caveat: DRI notes that, while price averages will stay in bounds, there could be some wide variations on a product-by-product basis. Specifically, many of the hard-hit basic materials (some of which have actually been operating in the red over the past year) could well slip temporarily into the double-digit range as they strive to catch up after a disastrous 1981-1982.

In any event, here is a more detailed appraisal of where the big econometric consulting firm does prices for specific industries and product lines going through 1985.

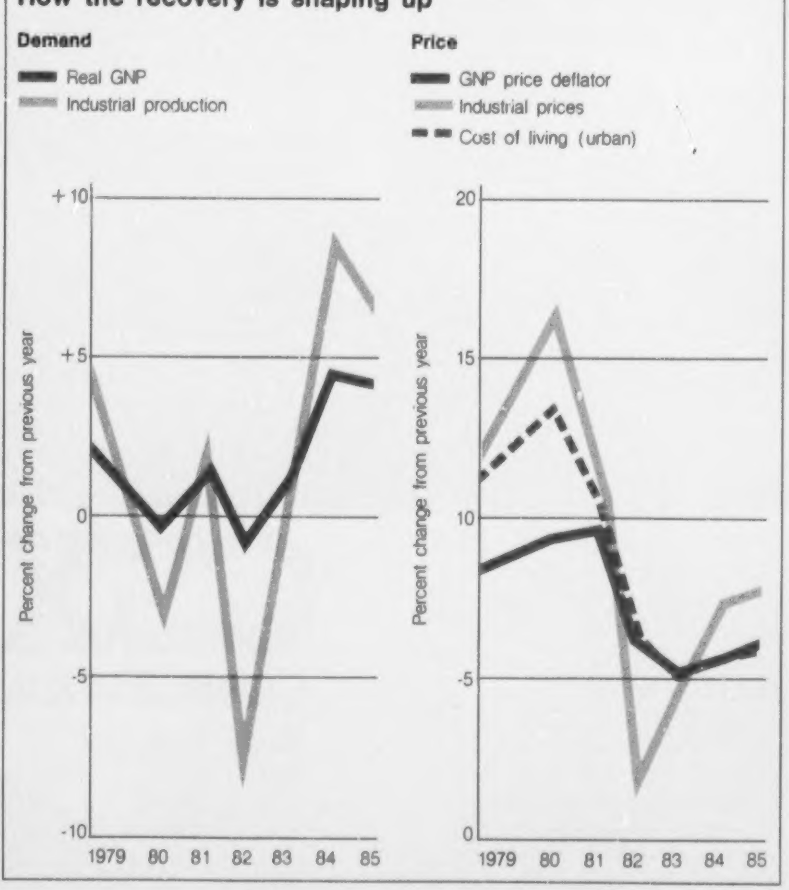
■ **Petroleum:** The continuing oil glut will mean relatively small increases—though some acceleration from today's exceptionally weak levels is anticipated in 1984-85. All told, DRI sees a compound annual rate of increase (CAR) of only 6.0% over the three-year period. (See table for more specifics on gasoline and lube oils.)

■ **Coal:** Less-than-sensational demand will preclude any really big jumps here. Best bet: a three-year CAR of 8.5%.

■ **Natural gas:** This will be one exception to the overall moderation anticpated in the energy area—with a CAR of 12.5% seen over the nearterm forecast period. Blame it on continued—albeit gradual—decontrol of the clean-burning. fuel.

■ **Electricity:** The nearterm CAR

How the recovery is shaping up



Source: Data Resources, Inc.

The price outlook into 1985
(Comparison of second quarter pricing)

Price increase (%)	1982/81	1983/82	1984/83	1985/84
Raw materials, energy				
Manufacturing supplies	5.6	2.7	7.5	8.4
Processed fuels & lubricants	-5.0	5.1	8.4	7.9
Gasoline	-16.1	5.8	6.1	5.1
Middle distillates	-13.2	11.4	8.0	10.0
Metals				
Oil well casing, carbon	15.3	-0.2	8.6	10.0
Oil well casing, alloy	23.5	-2.8	10.1	8.3
Titanium sponge	-15.1	-7.9	8.3	11.6
Aluminum shapes	2.5	1.1	8.4	11.2
Steel mill products	5.9	1.3	11.0	9.4
Pipe & fittings	7.0	1.7	9.5	7.6
Wire rods, carbon	7.7	2.7	10.1	13.5
Heavy structural plate	9.3	-5.0	11.7	10.2
Components				
Finished lubricants	3.0	1.6	7.4	5.4
Digital bi-polar ICs	-4.7	-2.2	4.5	3.7
Machine shop products	11.0	2.9	9.6	9.5
Corrugated products	0.0	-0.2	5.3	5.1
Abrasive products	8.1	1.4	2.4	7.1
Valves & fittings	4.3	1.4	7.7	8.9
Construction materials				
Explosives	2.8	1.5	3.3	9.0
Sand, gravel, stone	6.4	4.7	4.7	7.2
Paint materials	2.5	1.0	9.9	10.0
Plastic construction products	-5.2	5.1	6.8	6.9
Water heaters, gas	8.7	4.5	6.5	9.8
Machinery				
Oil field machinery, tools	13.8	1.2	7.7	10.6
Motor trucks	6.5	6.3	8.8	8.3
Mining machinery parts	6.5	4.5	4.9	10.0

Note: Selected from more than 200 wage and price forecasts
Source: Data Resources Inc., Cost Forecasting Service

here is put at just over 10% with the upward momentum coming from both fairly strong natural gas and coal fuel inputs—plus still-rather-high capital costs.

■ **Steel:** The overall rise will be quite modest at first—only about 3.3% on a list price basis this year. But heftier 9-10% annual increases are predicted for both 1984 and 1985 as demand picks up. All in all, look for an 8.7% CAR over the 12 quarters ending in late 1985.

■ **Foundry shop products:** Rising transportation and machinery demand should make for firming prices. Nearterm CARs for grey iron castings, standard malleable iron castings, and steel forgings are put at 6.2%, 10.3%, and 9.6%, respectively.

■ **Aluminum:** High inventories will limit 1983 price hikes—keeping them to relatively modest proportions. But some big boosts loom ahead for 1984 and 1985, as recovery in the auto, housing, and aerospace markets accelerates. Upshot: Average 13% rises over this latter two-year period. Other projected increases (CAR basis) over the 1983-85 period: aluminum shapes (8.8%) and siding coil (11.8%).

■ **Copper:** Prices will recover somewhat faster here than in aluminum, because of both the lower inventories and the longer period of weakness in recent years. Forecast for the rest of 1983: quarterly increases in the order of 5.5%. Another upward-tugging force: Prices at latest report were still running some 10¢/lb under the domestic industry's breakeven point.

■ **Lead:** Sizeable increases are projected because of the expected recovery in auto demand. Over the next four quarters, for example, quarterly price increases could average more than 6%—with gains over the second half of 1984 and all of 1985 averaging near 2% per quarter.

■ **Wire and cable:** Improving demand points to quarterly increases in copper-based products of 2.1% through the forecast period. Aluminum-based wire and cable will move up at a slightly faster 2.3% quarterly rate.

■ **Abrasives:** Relatively sluggish demand will hold the nearterm CAR to only 5.1%.

■ **Bearings:** Improving orders from the auto and railroad sectors suggests accelerating price increases—with the CAR over the three-year forecast period estimated at 8.7%. The biggest advances will come in 1984 and 1985.

■ **Industrial chemicals:** Very modest increases are seen over the current year. And even in 1984 and 1985, the boosts won't be all that great—6.8% and 6.5%, respectively.

■ **Paper and paper products:** Count on a slowly rising trend. Bond paper should sport a 5.5% CAR over the three-year forecast period, with corrugated boxes advancing at a slightly more robust 5.9% rate.

■ **Construction materials:** Products oriented toward the residential market will move up faster this year than those geared to nonresidential applications. In any event, purchasing execs can look for these average 1983 advances: insulation board (7.0%), sheet metal products (3.4%), refractories (1.7%), plastic construction products (5.1%), flat glass (2.8%), and concrete products (4.4%).

■ **Nonelectrical machinery:** Brace for accelerating advances in metal-cutting machine tools—from a quarterly increase of only 0.7% in fourth quarter 1982 to over 3% per quarter by the end of 1984. And for overall metalworking machinery, a small 3.6% average increase in 1983 will give way to 9%-plus advances in both 1984 and 1985.

■ **Capacitors:** Quarterly increases averaging 1.4% are projected for the remainder of the year. But by next year, these boosts could be running at a much bigger 2.5% quarterly rate.

■ **Semiconductors:** Good news on the digital MOS integrated circuit front; less than a 2% increase is forecast for the last six months of the current year. And beyond that, even smaller boosts are possible—on a combination of new technological advances and continued intense competition. ***PW***

What PMs are thinking

Inventory levels are satisfactory

The inventory paring of the past year or so may be just about over.

A fair number of purchasing executives responding to a nationwide ***PurchasingWorld*** survey would still like to see them a bit lower. But by and large, most buyers are pretty much satisfied—with 40% now rating stock levels as "just right"—the highest such percentage in years.

As one Midwestern metalworking executive put it, "It's been a long time, but our targets have been achieved. And if business continues to show signs of improvement, we may well have to think of adding to inventories again."

This cautiously optimistic picture is confirmed by these responses to other survey questions:

- **Recent reductions:** Some 51% of the respondents now say they've managed to cut days' supply over the past six months—far outweighing the small 13% who note continuing rises in this key yardstick of overall inventory health. Another positive sign here: Only about one in four say their supplies are at or above the 60-day level.
- **Nearterm plans:** The number of respondents contemplating some sort of increase in the physical volume of their holdings over the next six months (56%) is more than double the 25% who feel further tonnage declines may be in order. In short, inventories are likely to be a plus factor in the overall demand outlook over the next two quarters.
- **Price hedging:** A goodly number of buyers (40% to be exact) still plan to lay in a bit extra against possible price hikes later on as markets gradually firm. This is actually somewhat more than in November 1982 when a similar question pointed to only about a 35% figure. Some of the potential hedged items: steel, aluminum, copper, bearings, fasteners, natural rubber, and some types of machinery.
- **Strike hedging:** This is practically nonexistent—primarily because few respondents expect any major supply disruptions this year.
- **Leadtimes:** There's considerable concern here—with about one out of every three expecting some stretchout as the year wears on if the economy improves as expected. Areas being closely monitored in this respect: steel, aluminum, bearings, electronic parts, electrical components, petrochemicals, steel cans, gypsum, and specialty products.
- **Carrying costs:** Replies to this question show a wide variation—with annual percentages ranging all the way from 12% to over 36%. The average, for what it's worth, comes to near 22%—or the equivalent of near 2% a month.

This current 22% average, incidentally, is somewhat lower than the near-30% figure reported in the fall of 1981 when interest rates (perhaps the biggest cost factor) were close to 20%.

But despite today's somewhat lower carrying costs, purchasing managers seem determined to keep a lid on overall inventories. Some of the approaches being used: (1) insistence on better sales forecasts, (2) additional reliance on distributors, (3) more and improved MRP systems, (4) tighter delivery requirements on "A" level dollar items, (5) improved liason with suppliers, and (6) more longterm contracts and blanket orders.

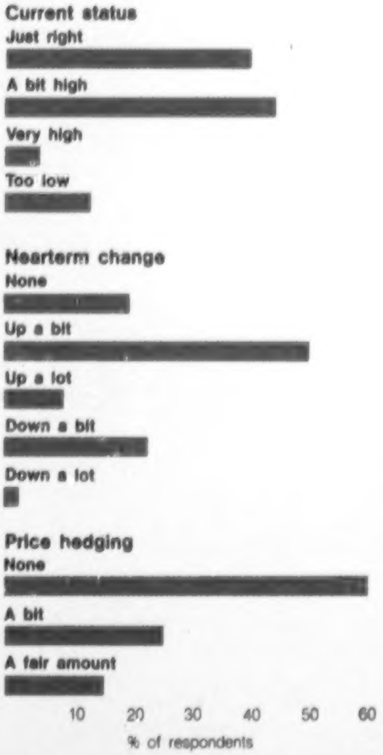
Several also say they're trying to emulate the Japanese—with their ultimate goal the "just-in-time" delivery approach that the Japanese have been so successful with.

Many add that they're using the current buyers' market to pressure suppliers to both hold the line on prices for the rest of the year and hold inventories for them at these lower negotiated prices. Observes one PM, "You'd be surprised how many reputable vendors are willing to go along if the volumes are big enough."

Another purchasing executive sums it all up, "We are giving vendors our best forecasted requirements possible to assist them in lowering inventories on hand or in the pipeline to meet our production schedules. Better communications, daily and weekly, with them has improved our present material flow to our production facilities.

"This, in turn, has enabled us to maintain more constant inventory levels and eliminate drastic swings. An added plus has been extended price protection. In some instances, we reduced our purchase costs from previous agreements." ***PW***

PMs take another look at inventories



Source: *PurchasingWorld*

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Vol. 27, No. 6 - June 1983

Helping you manage the business of buying

4 **Letters**

9 ***PW* Predicts**
Behind the continuing price lull

21 **Datatrak**
Key economic trends 21
Current prices 22
Steel scene 26
Procurement status 28
Leadtimes 32
Spot market prices 36

40 **Purchasing Law**
Questions from purchasing people

42 **Value Analysis**
Beware of cost masquerading as quality

46 **Negotiations**
Draw on others' knowledge and experience

52 **Trucking deregulation means opportunities for buyers** *
The PM who has done his homework is in an excellent position to reduce his purchase prices for materials through lower transportation costs and better service.

61 **TOWARD NEW FRONTIERS**
25th anniversary special section

63 **1958-1983: PMs on the economic roller coaster**
66 **PM of the future: manager and strategist**
70 **Help for harried PMs**

81 **43 ways computers can help you**
Day-to-day challenges demand fast, on-the-mark responses from purchasing—and aggressive use of computerized systems will help you meet business targets.

84 **Freight costs: a 3-year forecast**
Here's a forecasting model that provides a comprehensive rundown on likely rate changes in every key shipping sector to help you call the turn on freight costs.

90 **Proper packaging can prevent liability problems**
Last-minute decisions on product packages can lead to customer complaints and costly claims. Here are ways to avoid them.

97 **Strong incentives for foreign buying**
Imports are still high on the list of purchasing managers' cost-cutting strategies this year.

103 ***PW TechFile:* Types of springs**
PMs who have a knowlege of spring terminology and applications can optimize their working relations with both design engineers and spring suppliers. Here's an overview of the basic types of springs.

138 ***PW* Perspective**
You're not getting older, you're getting better

* Metalworking issues

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PW PREDICTS

Robert S. Reichard, executive editor

Behind the continuing price lull

The price outlook remains surprisingly rosy—despite nearly two quarters of modest demand pickup.

The overall GNP price advance for the April-June period, for example, is now estimated at only 4%. That's two full percentage points under the average 6% increase noted during recession-ridden 1982.

The news on the industrial buying front is equally encouraging. True, there are now more purchasing managers reporting price increases than decreases. But for the most part, boosts are quite moderate—small and spotty, rather than large and across the board.

This pattern is even holding for highly volatile raw materials. Recent hikes have been quite modest, with reattainment of pre-recession price peaks still nowhere in sight.

The reasons for the continuing price lull aren't all that hard to find. A huge capacity glut, coupled with only a 3-4% growth rate, continues to guarantee plenty of buyer leverage. In fact, it may not be until mid-1984 that operating rates move close to the 80% level—a figure that most economists feel is the dividing line between a buyers' and sellers' market.

Foreign competition is also helping to moderate potential increases. As a recent ***PurchasingWorld*** survey suggests, price savings of 15% and 20% are not all that uncommon. And even where PMs fail to take advantage of such buys, the mere knowledge that such bargains exist serves to make domestic suppliers think twice before posting any big new increases.

Nor is the current price restraint only due to supply-demand factors. Equally, if not more, significant is the continuing wage respite. Pay pacts inked by the big unions in the first quarter, for example, showed little more than a 2% increase over the life of the contracts.

In addition, recent increases in productivity coupled with the expectation of continued wage restraint suggest that unit labor costs—a prime indicator of price pressures—will be rising only about 3% this year.

Chances of holding down consumer price inflation also look a lot better these days. Restraints here would have to include (1) slowly falling interest rates, (2) relatively stable energy prices, and (3) a still-improving food outlook.

Not surprisingly, all this good news is also creating more optimism for the longer pull. Without exception, financial executives responding to a new Conference Board survey see clear sailing on the price front through 1984. Equally significant, their inflation forecast (GNP basis) over the next five years calls for only a 5.6% average increase.

Zinc

Prices continue relatively firm—up a few cents from the lows of a few months back. Demand isn't all that bad either—with orders running about 5-10% above 1982. But that won't be nearly enough to recoup last year's big 19% drop in U.S. slab zinc demand. Holding bigger gains back are (1) reduced per-car usage of zinc die castings (only 22.7 lb in 1982—some 49% under levels of six years earlier) and (2) substitution of less intensive zinc-containing products such as thin wall castings and Galvalume (a

Energy

The overall energy outlook continues to brighten. Thanks to the recent decline in crude oil quotes, for example, petroleum-based products are expected to rise by 3% or less over the next four quarters.

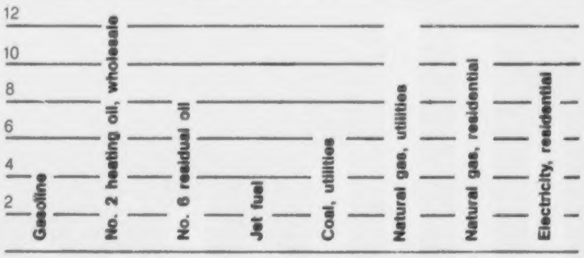
At least that's how Department of Energy analysts see it. And believe it or not, one item (No. 2 heating oil) is actually expected to show some fractional decline over this 12-month period. Also worth noting: In all cases, the projected oil-product increases (see chart) are below those made just three months ago.

To be sure, somewhat bigger increases are projected for other fuel and power sources—notably coal, natural gas, and electricity. But here, too, there are some grounds for optimism. Thus, the end-of-1983 forecasted natural gas and coal price levels are some 2.3% and 2.7%, respectively, under levels predicted a few months earlier.

The above numbers, incidentally, are based on the assumption that OPEC will be able to hold the price line. Should crude oil weaken further—and some energy people still see this as a distinct possibility—then price levels could well settle at even lower levels.

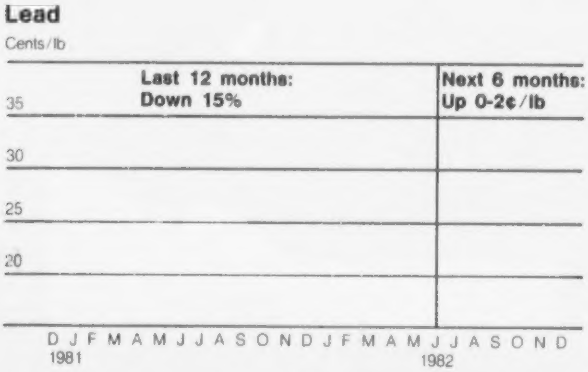
Energy price trends

Percent change: 2nd qtr 1983-2nd qtr 1984



Source: Department of Energy

Lead



CURRENT SITUATION: The heavy metal continues to sag. Prices are barely above the 20¢/lb mark, and there is no immediate sign of any major reversal. Inventories are sky-high on both the producer and exchange levels. And year-to-date demand from battery makers continues to disappoint. But low consumer inventories (the only bullish sign) suggest that any future consumption gains will quickly be translated into new orders.

DEMAND: A somewhat better second half should manage to push 1983 usage up a few percentage points. Even so, totals will be nowhere near the close-to-1.5 million tons that cleared the market in 1977 and 1978. But next year (1984) looks a bit better as the car and, hence, battery markets continue to improve. **But gains will be modest—as the lead-in-gasoline phaseout continues and batteries get smaller and more effective.**

SUPPLY: The glut is here to stay, not only because of the modest demand recovery anticipated, but also because of huge secondary capacity (estimated at near 1 million tons). Then, too, there's the big reservoir of scrap (estimated at over 700,000 tons this year), which is well above levels needed by secondary smelters. **Finally, there's more-than-adequate mine capacity**—a potential that may be used because of the byproduct silver.

PRICE OUTLOOK: Quotes are as low as they're likely to go. On the other hand, it's hard to make a case for any big bounceback. Some modest nearterm rallies are possible if some of the upcoming labor negotiations run into snags. Best bet: little meaningful price change until late summer or early fall when **the start of the new battery season may be enough to permit a rise of a few cents.** As for breaking the 25¢/lb barrier—that may well have to wait until early next year.

metal combination which contains only 45% zinc). As such, further nearterm price increases will be hard to come by—though a modest climb into the 42-45¢/lb range by late fall can't be entirely ruled out.

Electronics

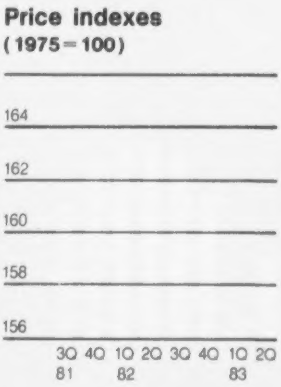
Passive components present a mixed picture. Prices are stabilizing—though at very low levels. In any case, manufacturers, bolstered by somewhat bigger order books, now say they can hold tags steady for the rest of the year. On the other hand, there are still pockets of weakness—notably in some high-volume metal film resisters, solid tantalums, trimmers, and new snap-in aluminum electrocytic cups.

Elsewhere in the electronic component field, electromechanical relay tags have also begun to level off. But nearly everyone agrees here that any nearterm bounceback to pre-recession levels is out—as overcapacity and tough Japanese competition keep markets under pressure.

Manmade fibers

Brace for a series of modest price hikes (somewhere in the 5-10% range) after midyear—over and above recent boosts in polyester filament and nylon. Behind the uptrend: Gradually improving demand, lower user inventories, rising production costs, and improved operating rates.

On the latter score, the typical manmade fiber plant is operating at near 80% of its potential—far above the low 68% average for all of last year). And 85%-or-higher rates are noted for industrial polyester filament, polyester fextile filament, nylon textile filament, and nylon carpet staple.



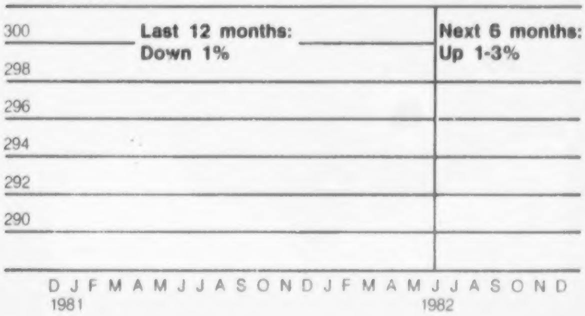
Steel

Second quarter shipments don't look all that robust, with only about 18 million tons expected to clear the market. Overall 1983 projections are also being toned down—to only about 70 million tons. While a lot better than last year, that's still far under the 87 million tons shipped in 1983.

Not surprisingly, price competiion is still strong, making any new attempts at posting increases extremely questionable. Worth noting: Paine Webber still puts the world spot export quote at under $350/ton—little changed from first-quarter levels.

Chemicals

Chemicals
Index: 1967 = 100



CURRENT SITUATION: Most markets have pretty much bottomed out, but recovery is slow. First-quarter output of chemicals and related products rose less than 2% on a seasonally adjusted basis, and **second quarter gains are not expected to be any more robust.** Operating rates remain low, with producers of key chemical materials still mired in the mid-60s range. **Prices, too, have been slow to turn around**—with discounting erasing a good portion of any overall list gain.

DEMAND: The slow, halting improvement will continue; output totals are expected to show about a 5-6% advance for the year as a whole. **Gains will be mixed on a product-by-product basis.** Expected demand increases for some key chemicals are: benzene (2%), styrene (6%), toluene (23%), xylene (11%), butadiene (11%), ethylene (13%), propylene (9%), VAM (6%), chlorine-caustic soda (4%), soda ash (2½%), titanium dioxide (6%), and methanol (6%).

SUPPLY: No problems, given today's excess capacity. Overall industry operating rate could rise to 70% (from slightly under 68% for all of 1982). Several individual sectors will be much lower. Some current operating rate projections: benzene (58%), toluene (45%), xylene (54%), butadiene (46%), ethylene (69%), propylene (61%), methanol (62%), VCM (67%), caustic soda (64%), soda ash (71%), and titanium dioxide (74%).

PRICE OUTLOOK: Look for continuing hikes. But they'll generally be modest and subject to considerable discounting. Relatively low feedstock costs and overcapacity will limit 1983 petrochemical and plastic resins advances to perhaps 5%. **The outlook for inorganics is more mixed.** Chlorine could rise another 10-15%, but alkalis will be hard put to maintain their current low levels.

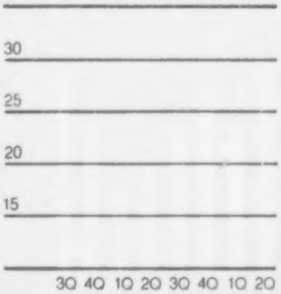
As one service center executive sums it all up, "It's still a market where the price book means very little.

Polyvinyl chloride

Prices are beginning to firm. And while not all of the recent 8¢/lb increase will hold, the feeling is that most buyers will be paying as much as 6¢/lb more than they did for their formulations (relative to beginning-of-year levels). This should leave most prices generally in the 30¢/lb or slightly higher range.

Bolstering the upward trend is the current improved demand pattern—sparked by construction, which accounts for more than half of all use. All told, some 6.1 billion lb could clear the market this year—some 15% above 1982 and enough to bring operating rates up near the 80% level later in the year.

Market prices
(pipe grade) ¢/lb



Computers

The price war in personal computers (PCs) continues to heat up. Latest developments include new entries by Texas Instruments in the market and (2) new reductions ranging upwards of 20% by some of the smaller outfits who want to retain their competitive edge.

Along with price cuts, some firms are also attempting to lure dealers with exclusive territories, participation in national accounts, and drop shipment of hardware to customers. Nor is that the end of the line. A combination of product upgrading and further price cuts could well give buyers another 10% or so more for their money before the year is out.

Aluminum

Scattered increases in product prices—including common alloy sheet and residential siding—have been posted over the past month or so. Ingot, on the other hand, is taking a breather, after rising some 20¢/lb (into the 60s) over the past 6-12 months.

A period of consolidation, rather than continued boosts, is also suggested by the recent startup of potlines, which will increase the operating rate from its recent 56% low to something near 62½% by summer.

Best bet: Quotes will back and fill around current levels for another few months—with perhaps a gradual creepup toward the 78¢/lb level (ingot basis) toward yearend.

continued on page 16

PW PREDICTS

Gold

The gold market remains relatively quiet—a pattern that is expected to persist for another few months. However, the basic supply-demand fundamentals are pointing to some modest updrift over the longer pull.

A recent study, for example, indicates that while new production may be up 1.1 million oz this year (to 40.7 million oz), world fabricated product demand will be up 3.4 million oz (to 31.3 million oz)—thus leaving only a relatively modest 9.4 million oz available for investors. But hikes over the last part of the year will be moderate, with the metal hard put to approach even the $500/oz level.

Paper

The heretofore shaky paper industry is finally beginning to show some signs of firming. Straws in the wind:

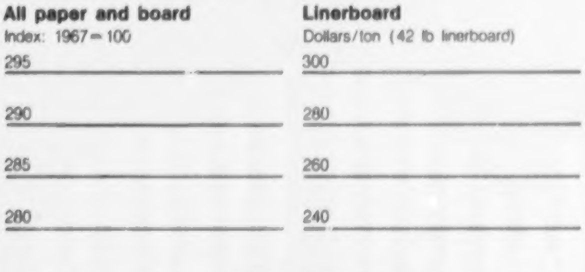
- The new $20/ton increase is off-list pricing of unbleached kraft linerboard—a boost which has brought these tags back into the $270/ton range.
- A price hike that is just now going into effect on industrial tissues.
- Renewed attempts to bring newsprint back into the $500/metric ton range—up 6.7% from recent levels.
- Narrowing discounts in white paper grades.

To be sure, there are still some weak spots—notably consumer tissue and lightweight coateds. And it's not altogether certain whether glutted supplies will permit the new newsprint increase (scheduled for July 1) to stick. But by and large, the overall trend now seems to be up (see chart).

All this is likely to be aided by slowly improving demand and somewhat higher operating rates. On the demand side, for example, fiberbox shipments look to be up 6-7% this year—bringing square footage back to previous 1979 peaks.

And on the operating rate front, unbleached kraft linerboard producers could average near 92% this year (versus 85% in 1982)—and thin-paper production could approach 98% of its potential (versus 87% last year).

Paper and board price trends



Source: Bureau of Labor Statistics, Industry Sources, PW estimates

Computer software

Prices are slipping in line with lower hardware tags. And they could drop even more. A new survey by *Software News*, for example, projects a 61% increase in dollar outlays this year—with unit values up by some 75%. This suggests about a 14% decrease in overall tags vis a vis 1982—reflecting both price erosion and new offerings at lower prices.

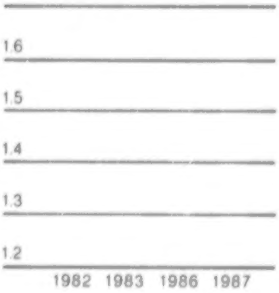
Another interesting finding of the study: Corporate users of PCs prefer by nearly a 4:1 margin to buy their software direct from the software vendor or computer maker—with retail stores ranking a distant third.

Vinyl acetate monomer

Count on continuing bargains in this key chemical building block (some 4¢/lb is currently being shaved off the official 34½¢/lb list). Reason: Declining exports are affecting most an expected 6.8% increase in domestic tonnage.

Buyers are likely to remain in the saddle over the longer range, too, as growing overseas capacity cuts U.S. exports in half over the next five years. Given this scenario, U.S.I. Chemicals doesn't see the overall operating rate in this sector moving out of the current 78-79% range through 1987.

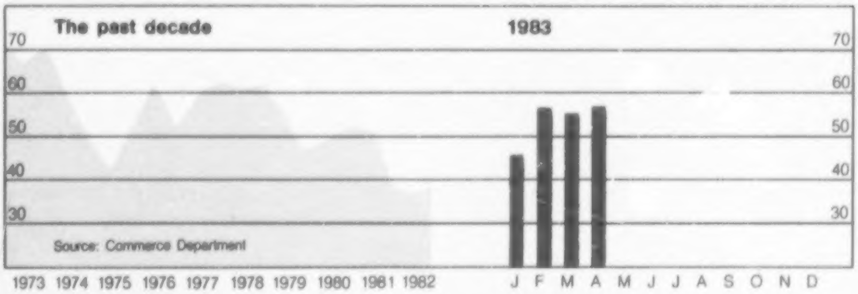
VAM consumption
(Billions of lb)



Copper

Quotes are probably as high as they're going to go—at least as far as the next few months are concerned. Indeed, some temporary corrections can't be ruled out on a combination of (1) still-high exchange stocks—estimated at over 300,000 tons on both the LME and Comex, (2) gradual reopening of previously shuttered mines, (3) the increasing liklihood that a major U.S. strike can be avoided, and (4) continued all-out production by many Third World countries. Add in only slight demand gains, and it may well take another 6-12 months before producers can approach their estimated 85-90¢/lb break-even point. ***PW***

BUSINESS DATATRAK



NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)

Source: Commerce Department

KEY ECONOMIC TRENDS

Continued restraint is likely

Much of the early 1983 euphoria has started to fade.

That's not to say that the economy won't continue to advance. It will. Indeed there's pretty much unanimity on this score. But the feeling now is that growth will be fairly slow—nothing like the 7%-or-so annual rates of advance in GNP noted during the first year of other recent business pickups.

The relatively restrained recovery is also confirmed by the NAPM Business Barometer, an indicator designed to project activity a few months down the pike. The latest reading here is 57.1—only moderately above the neutral 50 mark and under the 6%-and-higher figures racked up during the initial stages of the 1976-77 pickup (see chart).

Also worth noting: Much of the year-to-date increase in real GNP can be traced back to the end of inventory paring rather than to any big increase in final demand. Indeed, the growth in this latter sector during the first quarter was miniscule.

One of the big problems in beefing up final demand is interest rates. True, the prime rate has been edging lower. But this crucial business and consumer cost remains in the double-digit range—still far too high to permit any really big jump in spending.

These high interest rates, among other things, are keeping consumers on the defensive. Granted, confidence is up. But with high borrowing costs, few households seem willing to take the plunge on a big-ticket item. Car sales over recent months, for example, have been running at only an 8½-million-unit annual rate—hardly the harbinger of a boom year for Detroit.

Curiously enough, these high interest rates haven't had too much of an effect on housing, where starts have been averaging above 1.5 million units a year in recent months. But even here there are some signs of leveling off as housing permits (an advance indicator of starts) turn a bit lower.

Then, too, there has been some softness in the commercial and public building sectors of the construction industry. And weakness in these areas is likely to continue. A recent DRI forecast, for example, suggests that nonresidential activity could be off some 2% this year.

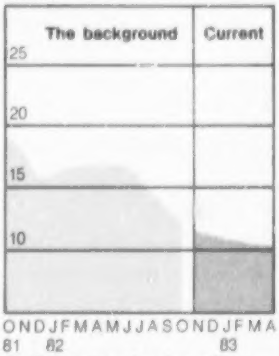
Finally, capital spending also leaves a lot to be desired. Most projections call for a modest dip here, too. And they're confirmed by the bellwether machine tool order series which—while bottoming out—is still well under yearago levels.

There could well be a temporary spurt later on as the big midyear personal income tax cut begins funneling some $30 billion a year into consumer

Leading indicators

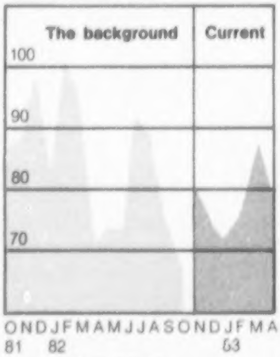
1. Prime interest rates

Percent



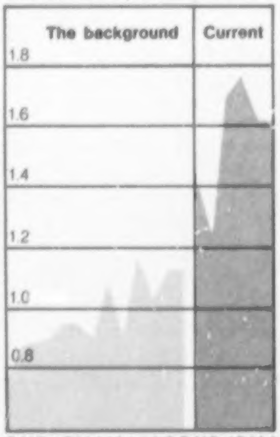
2. Consumer buying plans

Index: 1969-70 = 100



3. Housing starts

Millions, seas. adj. annual rate



hands. But the point to keep in mind is that nothing on the nearterm horizon indicates any major business acceleration. Thus, industrial production by the end of the year—though continuing to rise—will still be about 5% under pre-recession peaks.

Word processing still growing

Count on getting still more involved in the purchase of word processing (WP) equipment—either for your own shop or for other company operations. Moreover, the growing choice of equipment suggests the decision-making process is becoming increasingly complex.

A just released American Management Society survey provides the details:

■ **Overall usage:** Close to 75% of all responding firms now use some kind of WP equipment. And another 13% may be ready to take the plunge in the not-too-distant future.

■ **Type of equipment:** A standalone CRT display (with a separate printer) is the most prevalent—with some 60% of surveyed companies using this kind of device. Electronic typewriters aren't all that far behind with a 51% figure.

But the biggest new development is the trend toward small business or personal computers (with WP software). Usage here has jumped six percentage points (to 23%) over the past year.

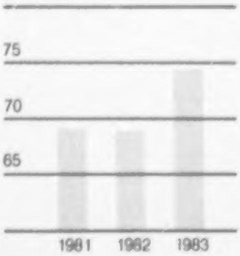
■ **Multifunctional equipment:** The increasing use of computers with WP software is one clearcut indication of multiple usage. And it's confirmed by the fact that 48% of the surveyed firms currently use WP equipment for at least one other function.

This, too, looks like a growing trend—as an even larger 68% say they're planning on multifunctional use over the next year or two. Top applications aside from word processing include (1) administrative support, (2) access to a central data base, and (3) the performance of electronic mail, data processing, or graphic functions.

■ **Improved efficiency:** Almost four out of every five firms have been able to quantify the savings stemming from the use of word processing.

Use of word processing equipment

(% of reporting companies)



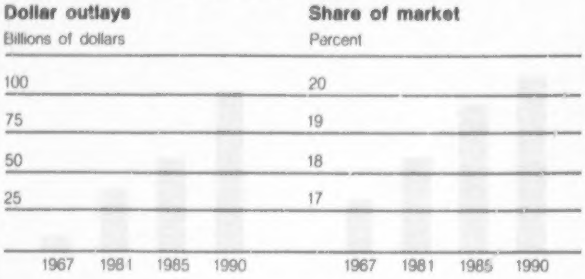
Types of word processing equipment used

(% of reporting companies)

Standalone CRT display with separate printer	60%
Electronic typewriters (limited internal memory or mag card)	51%
Multi-terminal (shared-logic or shared-resource)	33%
Data processing equipment with WP capability	32%
Small busines or personal computer with WP software	23%
Time-shared (terminal linked to outside computer)	9%

Source: Administrative Management Society

Equipment leasing: more gains ahead



More equipment leasing likely

The surge in equipment leasing over the past few years is no fluke. Indeed, if a new Predicasts study is anywhere near correct, leasing will continue to take an increasing share of your available capital spending dollars.

The big Cleveland-based economic forecasting firm, for example, sees annual rates of gain in the 11-12% range through 1990, at which time some 20.5% of all equipment will be on one kind of lease or another.

The reasons behind this still-growing trend aren't all that hard to find with gains sparked by (1) the need to conserve cash, (2) potential tax benefits, and (3) concern over possible equipment obsolesence.

Biggest growth (in the 13-14% per year range) is projected for nonmanufacturing equipment—a category which includes such lines as farm, mining, energy, and oil field machinery. Leasing of manufacturing types (in the 12-13% range) won't be far behind. But the biggest dollar figures will still be earmarked for transportation equipment.

On the other hand, the heftiest percentage gains will be in robotics—as a 60% annual rate of gain through 1985 and a 37% rate over the subsequent five years bring the leasing total here up to $320 million by 1990 (versus only $10 million in 1981).

Not much change is anticipated in the type of leases—capital versus operating. As in the past, the choice will depend on whether the lessee or lessor is more able to bear the risks and realize the tax benefits of ownership.

A similar "no-change" situation seems to be shaping up between manufacturers' and third party leases—with the latter expected to maintain the current close-to-80% share.

CURRENT PRICES

Averages show only minor changes

Chalk up another month of relative price easiness in the key industrial area.

A look at the some 50 individual items monitored by ***Purchasing World*** (see accompanying table) provides the details: Some 14 product lines show declines from the previous month, and another 11 remain virtually unchanged.

Energy again has proved to be one of the softest sectors. Substantial price declines are noted for home heating oil, gasoline, lubricating oils and natural gas. But government officials say that next month's figures could well show a modest turn up.

The same might be said of synthetic fibers, where new hikes in polyester have yet to filter through into official index readings.

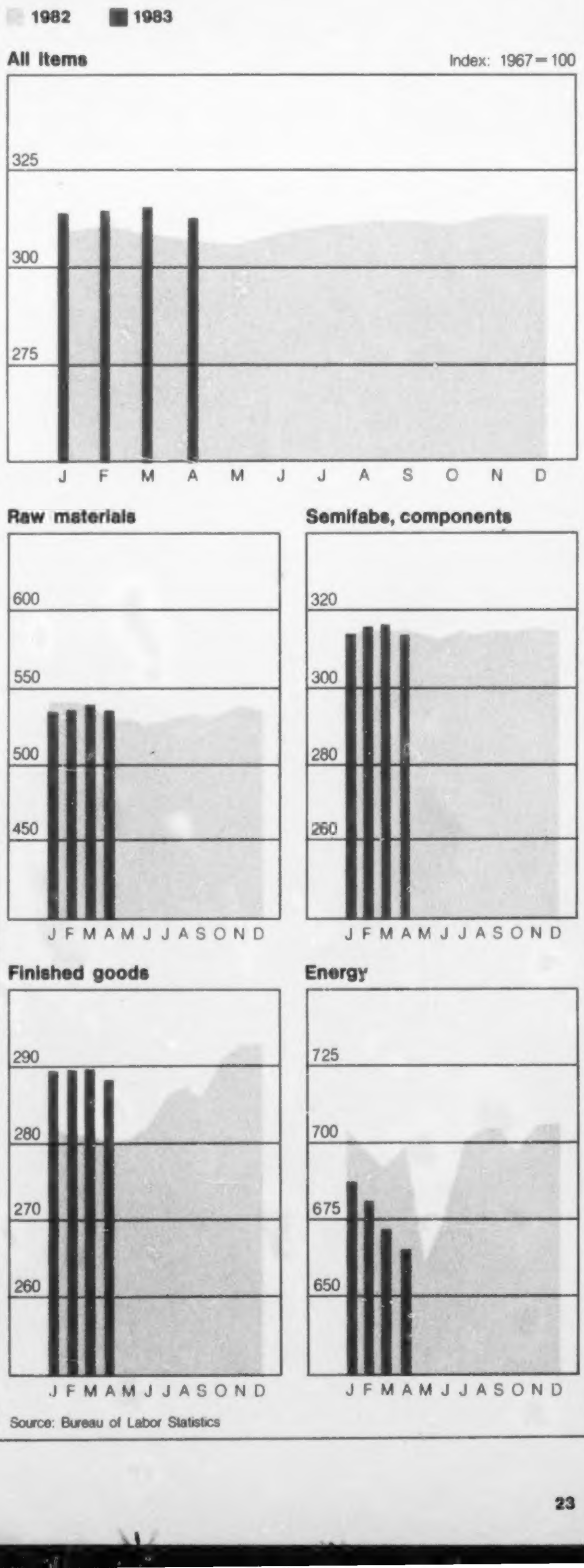
On the other hand, there are still some areas where soft markets seem to be the rule. These would have to include organic chemicals, steel mill products, tires and tubes, and some component parts.

Construction materials, meantime, show a more mixed picture. Gypsum products and structural

This month's breakdown

	Latest level (Feb.)	% change from: Month ago	% change from: Year ago
Bearings	331.2	0.0	0.8
Bolts, nuts, etc.	268.9	0.0	-0.7
Chemicals, inorganic	300.3	0.4	-3.8
Chemicals, organic	358.1	-0.1	-5.7
Concrete products	300.3	0.1	0.9
Corrugated cartons	239.6	0.2	-3.0
Cutting tools, small	279.1	0.5	0.8
Electrical instruments	268.1	0.0	6.8
Electric lamps (bulbs)	310.1	1.7	6.9
Electronic components	180.3	0.1	2.7
Fans and blowers	336.3	0.0	0.3
Foundry and forge products	352.1	0.3	1.5
Fuel oil (residual)	1086.2	3.2	-8.2
Furniture, commercial	286.7	0.5	4.6
Gasoline	564.4	-3.4	-11.1
Glass, flat	229.7	0.0	6.2
Glass containers	353.8	-0.1	-1.2
Gypsum products	271.4	3.0	3.1
Hand tools	345.2	0.2	2.9
Hand tools, power driven	361.2	0.8	0.0
Industrial furnaces	361.2	0.8	3.4
Integrating and measuring instruments	220.5	0.0	5.2
Internal combustion engines	340.4	0.5	5.9
Lubricating oil	788.3	-1.3	-11.2
Lumber millwork	302.7	-0.4	9.4
Material handling equipment	284.8	-0.1	-1.2
Metal containers	332.0	0.1	0.6
Metal mill shapes (nonferrous)	305.8	-0.2	1.9
Metal tanks	306.4	-0.6	-1.9
Motors and generators	321.7	0.5	4.0
Motor trucks (10,000 lb and under)	317.6	0.0	5.5
Office and store equipment	154.8	0.1	2.5
Paperboard	248.4	0.7	-4.9
Paper boxes and shipping containers	246.7	-0.3	-1.7
Paper office supplies	226.8	0.0	2.2
Paint	265.1	0.0	2.4
Plastic resins	284.7	0.7	-0.5
Precision measuring tools	245.0	0.0	3.8
Pumps and compressors	347.8	0.0	0.1
Refractories	338.7	0.1	0.6
Rubber belts and belting	329.9	0.2	1.0
Scales and balances	226.4	0.1	0.6
Steel products	347.3	-0.8	-1.1
Switchgear	268.6	1.7	1.9
Textiles, synthetic fibers	155.4	-0.6	-4.7
Textiles, gray fabrics	146.2	0.8	-0.1
Tires and tubes	246.6	-1.4	-2.7
Transformers and power regulators	225.4	0.5	1.3
Welding equipment	274.0	-0.1	0.6
Wire and cable	205.8	-0.1	-0.6

Industrial prices at a glance

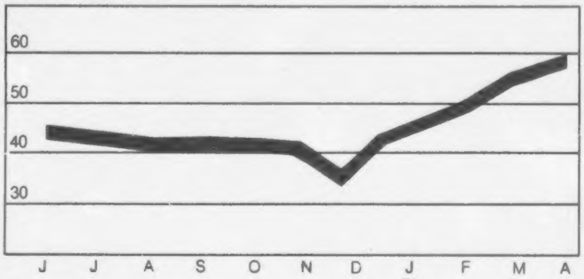


Source: Bureau of Labor Statistics

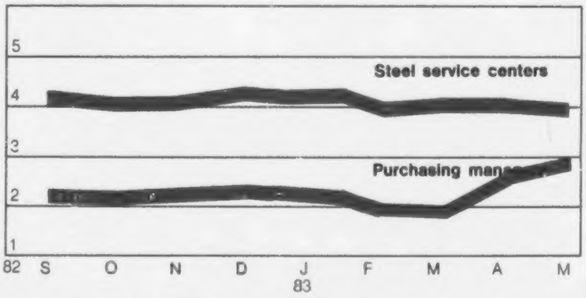
BUSINESS DATATRAK

Steel

Operating rates



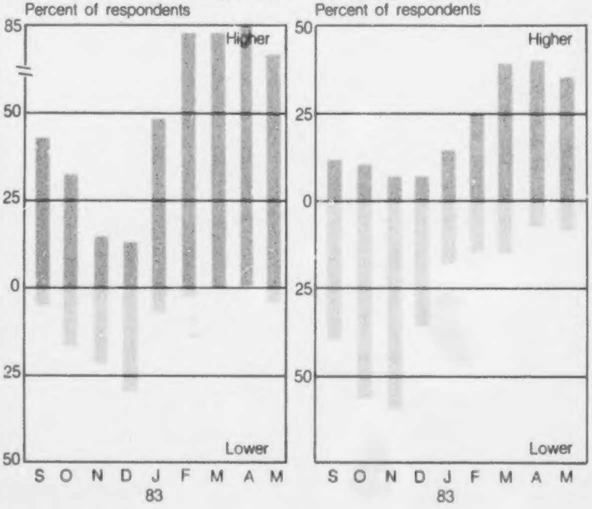
Inventories



Demand (over the next 3 months)

Service center incoming orders Percent of respondents

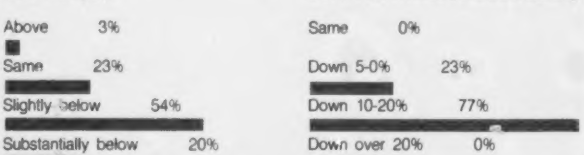
Steel buyer purchases Percent of respondents



Import prices (foreign vs. domestic)

Steel buyers

Service centers (carbon steel)



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

clay products are up. But flat glass and lumber millwork are both off a bit.

The same varied pattern is evident in capital equipment. While motor vehicles, machine tools, railroad equipment, food machinery, and mining machinery have all edged lower, these are being offset by advances in farm equipment, aircraft, commercial furniture, and generators and transformers.

How does it all add up? One government spokesman sees prices gradually bottoming out over the next few months. But he hastens to add that the annual rate of increase over this period will be quite low—probably only in the 1-2% range.

STEEL SCENE

Expect small gains for steel sales

Further gains in overall steel demand may be much harder to come by over the next few months.

This is something that both buyers and steel service centers seem to agree on. Only about one-third of PMs queried by the NAPM now expect to increase their receipts of the metal over the June-July-August period—well under the 42% response given to a similar question just one month earlier.

Distributors, responding to the latest Steel Service Center Institute (SSCI) survey tell much the same story. Specifically, only 69% expect an increase in their incoming order books over the next three months—well under the 82-85% figures of previous months.

One of the problems, according to Andrew G. Sharkey, SSCI president, is the less-than-sensational demand in some key metal consuming areas. He notes that machine tool builders, capital equipment manufacturers and the energy sector (all major markets for carbon industrial steel products) are still quite flat.

Sharkey also questions the strength of the auto market, observing that (1) retail sales are only averaging slightly ahead of last year's pace, and (2) some forecasters are scaling down their car sales projections for 1983.

But whatever the near-term trend, service centers should outperform the industry as a whole. One steel mill economist, for example, sees industry shipments to distributors up about 27% (to 16.5 million tons) this year—compared to an all-industry shipment gain of about 20%.

Inventories
Inventories, meantime, seem to be in good shape—with both service centers and buyers holding days' supply at the low levels achieved earlier this year.

More important, they mean to keep them that way. Some 80% of queried steel buyers say they hope to hold tonnages at current levels through fall—with two-thirds of the service centers indicating a similar intent. Also in both cases, the few that do expect to be adding to stocks will be offset by a similar number who plan to pare.

One of the reasons for this—aside from still-hefty carrying costs—is the continuing ready availability of virtually all steel mill products. Indeed, only one buyer and one service center expect any problems—and then only on one or two isolated product areas, such as coated sheets.

Imports

Both groups also seem to be in agreement on still another subject: the continuing inflow of cheap imports. In fact there's virtual unanimity on this score—with some 77% of queried distributors putting the savings on carbon steel in the 10-20% range (imports versus the comparable domestic product). Zero in on stainless, and some of these same service centers report price breaks in excess of 20%.

A steel buyer tally, which combines all kinds of steel, also confirms bargain-basement overseas prices—with one out of five currently describing the savings as "substantial." Two months earlier, only about 11% noted these kinds of price advantages.

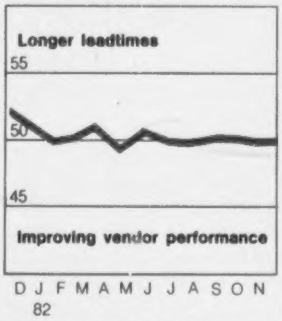
It's not surprising that all signs point to another big steel import year. More service centers and steel buyers, for example, now plan to increase than decrease their dependence on imports.

If these plans are carried out, it would make recent forecasts calling for only about a 15-million-ton steel import year somewhat suspect. Some analysts now feel that totals could again approach last year's 16.7 million tons.

Monthly procurement status report

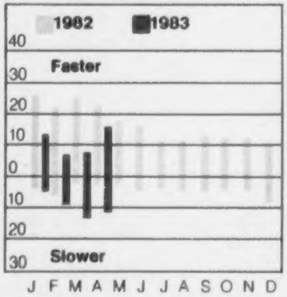
Leadtime index

A 'diffusion' index based on 158 key commodities. Above '50' indicates a tendency for leadtimes to stretch out. Below '50' suggests improving vendor performance.

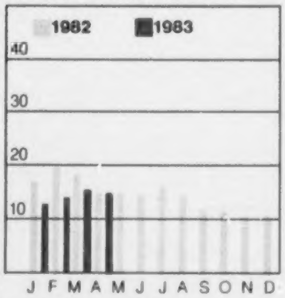


Delivery performance

Percent reporting deliveries

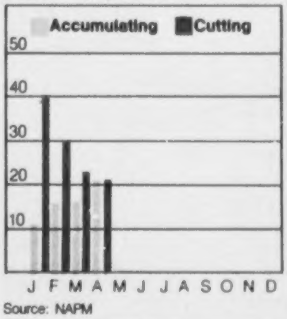


Forward commitments



Inventory strategy

Percent of respondents



Source: NAPM

PROCUREMENT STATUS

PMs expect no leadtime problems

Earlier concerns that the business recovery would mean a leadtime stretch-out have now all but disappeared.

Most purchasing managers queried in ***PurchasingWorld's*** latest procurement survey say that the pickup has been restrained to the point that suppliers have had no trouble in meeting the modest uptick in orders recorded over the past few months.

And it's a situation that looks to continue for at least another few months. As one purchasing executive puts it, "Business usually slackens seasonally during the summer, and there's little to indicate that the same won't happen this time around."

One thing for sure, current indicators continue to point to a "no sweat" situation. Operating rates, for example, are still in the low 70% range. And the average wait from time of order to time of delivery (as measured by ***PW's*** exclusive leadtime index) remains relatively unchanged at recent low levels.

Equally reassuring on this score is the fact that only a handful of PMs (less than 15%) report slower deliveries.

Not surprisingly, buyers continue to play their inventory cards close to the vest. Thus, stocks are holding relatively steady despite some increase in production activity. At latest report, for example, the 21% who said they were adding to their overall holdings was completely offset by a similar 21% who have continued to pare.

This same cautious pattern shows up in forward commitments, where only 14% report ordering 90 days or more in advance for production materials—a figure that has remained virtually unchanged since early last winter. Contrast this to the 40%-and-higher readings of pre-recession 1979, and it's clear that the majority of PMs are still betting on clear sailing in the months immediately ahead.

Leadtimes and availability

Chicago: Some stretchouts in nonferrous with these new, higher leads (in weeks): aluminum coil (12-14), aluminum sheet (12), aluminum angles, bars, and extrusions (4-8), brass sheet and coil (4-5). But sanded plywood and plyform are down fractionally (to 2). Electronic components are unchanged.

Cleveland: Slightly reduced waits (to 2-3 weeks) for coil coating paint. And maintenance paint can be had in just 2 weeks. Other very low leads for corrugated (3), 2-ply fiber drums (2), polyethylene and PVC (2), cold finished aluminum (7-8), alloying material (on demand), lumber (3), plastic shrink film (3).

Los Angeles: Small changes both ways. Lower leads (in weeks) for copper tubing (4), copper fittings (4), electro-mechanical devices (4-6), fasteners (4-8), aluminum sheet (4-6), and stainless (4-6). But stretchouts for galvanized steel (6-12), grey iron castings (12), brass castings (8), and pumps (12).

Circle 179 on card ➔

BUSINESS DATATRAK

Houston: Pretty much the status quo here as orders remain depressed. Typical leads (in weeks): reciprocating compressors (26-52), cast steel valves (17-52), MRO supplies (2-4), shop fabricated carbon steel pipe (17-34), packaging (0-4), steel (4-8), electronic parts (4-6), tungsten carbide parts (14-16).

Philadelphia: Carbon bar from mills are in a bit to (2-3 weeks). But wooden pallets take somewhat longer (1-2). Other reported waits: polyethylene plastic bags (2), corrugated (2-3), standard fasteners (2), bearings (12), standard pumps and valves (10), aluminum die castings (6-8), lube oils (0-1), linear ICs (10-12).

Pittsburgh: Paper bags have edged out to 4-6 weeks. No problems elsewhere, with these leads in weeks: corrugated (2-3); folding boxes (4-5); fiber, standard steel, and nonstandard steel drums (all just 1); steel strapping (2-3); seals (1-2); most alloying materials (2-3); and polyethylene and PVC resins (4).

Leadtimes (in weeks)

STEEL	Now	Month ago	Six months ago
Sheet (Phil)	5	5	5
C-R Sheet (Chgo)	13	13	4½
Plate (Phil)	4½	4½	4½
Plate (Chgo)	2	2	2
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5	5	5
H-R Bars (Chgo)	2	2	2
Cold-Drawn Bars (Phil)	6	6	6
Galvanized (LA)	9	4	4½
Galvanized (Chgo)	9	3	4½
Structurals (Chgo)	2	2	2
Structurals (Hous)	17	17	17
Tubing (Phil)	19	19	19
Grey Iron Castings (LA)	12	9	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	7	7	7
Pipe, Carbon (Hous)	13	13	26
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	5	8	9
ICs (Linear) (Phil)	11	11	12
Motors (Phil)	21	21	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	7	7	7
Relays (Chgo)	15	15	15
Resistors (Chgo)	10	10	10
Resistors, Wirebound (Phil)	6	6	4
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	2	2	2
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	1/5	1/5	1/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	1
Naphthalene (Chgo)	2	2	2
Paint (LA)	4½	4½	3½
Paint, Coil Coating (Pgh)	3	3	3
Paint, Maint. (Clev)	2	2	1
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	2	2	1½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	1	1	½
PVC Resin (Pgh)	4	4	4
Titanium Dioxide (LA)	1	1	1

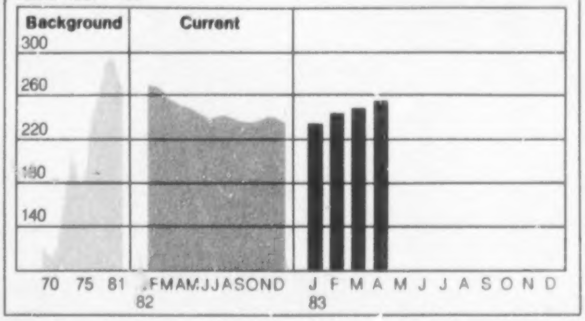
PACKAGING	Now	Month ago	Six months ago
Bags, Kraft (Pgh)	5	4	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	11
Cartons, Corrugated (Clev)	2	2	2½
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	34½	7
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	4	4	5
Shrink Film (Clev)	3	3	3
Drums, Fiher (Pgh)	1	1	3½
Drums, Steel, Std. (Pgh)	1	1	2½
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	6½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	13	9	7½
Aluminum Plate (Chgo)	9	9	7
Aluminum Sheet (LA)	5½	6½	6½
Aluminum Sheet (Chgo)	12	9	8
Brass Castings (LA)	8	7½	7
Brass Rods (Chgo)	4	4	2½
Brass Sheet (Chgo)	4½	4	5
Brass Tube (Chgo)	5	5	9
Copper Fittings (LA)	5½	5½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	4	6	3½
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	3
Wire, Specialty (LA)	5	5	6
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	12	12	22
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	52	52	52
Compressors, Reciproc. (Hous)	39	39	45
Fasteners (Chgo)	½	½	½
Fasteners (LA)	6	4	9½
Fasteners, Std. (Phil)	3½	3½	3½
Heat Exchangers, Carbon-alloy Steel (Hous)	30	30	30
Heat Exchangers, Hi-pressure (Hous)	43	43	43
Insulation Mat'l. (LA)	9	8	5
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1	1	1
Pumps (Hous)	41	41	41
Pumps (LA)	12	9	10
Rubber, Synthetic (LA)	2	2	1½
Rubber Hose (LA)	5	5	6
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	15	8	13
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Index: 1967 = 100

Latest month	**253.7**
Month before	**248.0**
Year ago	**347.4**



Latest spot market prices

FERROUS METALS	Latest price	Previous month	Year ago
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	347.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	22.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	22.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	24.40
Steel, bars, dlvd. Phila., cwt., merchant quality	17.50	17.50	14.35
Steel, bars, Pitts, cwt.	17.50	17.50	14.35
Steel, bars, C.R., Pitts, cwt.	26.00	26.00	31.00
Steel, plates, Pitts., cwt.	25.75	25.75	24.25
Steel, plates, H.R., Pitts., cwt.	25.75	25.75	24.25
Steel, sheets, C.R., Detroit, cwt.	26.15	26.15	24.65
Steel, strip, C.R., Chi., cwt.	29.05	29.05	29.05
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65

NONFERROUS METALS	Latest price	Previous month	Year ago
Aluminum, ingot, lb. (market place)	0.65	0.63	0.46
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	4.95	4.95	4.60
Brass, red, 85%, [sheet], lb.	1.30	1.28	1.20
Brass, yellow, [sheet], lb.	1.24	1.22	1.14
Cadmium, ton lots, lb.	1.00	1.00	1.10
Copper, electrolytic, wire bars, refd., lb.	0.82	0.80	0.78
Copper sheet, over 24 in., lb.	1.39	1.37	1.29
Lead, common, N.Y., lb.	0.21	0.21	0.26
Magnesium, pig ingot, [99.8%], lb.	1.34	1.34	1.34
Mercury, 20 fl. lots, N.Y., fl.	325.00	330.00	364.00
Molybdenum Climax Oxide/bags, lb.	4.65	4.65	8.50
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	12.40	11.24	7.13
Tin, Straights, N.Y., lb.	6.84	6.90	6.59
Zinc, Prime West, East St. Louis, lb.	0.40	0.38	0.35
Zinc, die casting alloy, No. 3, lb.	0.465	0.465	0.415

PAPER	Latest price	Previous month	Year ago
Uncoated book 13 offset, ton	680.00	680.00	800.00
Watermarked bond, ton	845.00	845.00	845.00
Gummed sealing tape, carton	15.50	15.50	15.70
Boxboard, mach. clay ctd. recycled sheets 80 bright, .016, ton	475.00	475.00	475.00
Wrapping paper, std. distribution cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	270.00	270.00	270.00

TEXTILES	Latest price	Previous month	Year ago
Burlap, 10 oz., 40", N.Y, yd.	0.241	0.269	0.244
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	0.97	0.95	1.00
Cotton middling, 1", N.Y., lb.	0.659	0.658	0.641
Printcloth, 48", 80x80, N.Y., spot. yd.	0.58	0.57	0.63
Army duck, 37", 13 oz., yd.	1.60	1.60	1.70
Blended printcloth, 64", 78x54, yd.	0.670	0.670	0.625
20s combed yarns	1.68	1.68	1.72
Wool tops, N.Y., lb.	3.60	3.60	3.60

CHEMICALS	Latest price	Previous month	Year ago
Acrylonitrile, tanks, lb.	0.43	0.43	0.46
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	150.00	150.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.46	1.45	1.52
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.66	0.66	0.66
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	0.106	0.106	0.101
Glycerine, synthetic, tanks, lb.	0.730	0.730	0.805
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.715	0.715	0.715
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.245	0.255	0.420
Polyethylene resin, low density liner film grade (market price), lb.	0.30	0.30	0.27
Polypropylene, homopolymer grade (market price), lb.	0.35	0.35	0.38
Polystyrene, general purpose grade (market price) lb.	0.39	0.39	0.37
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.300	0.300	0.375
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	135.00	135.00	147.50
Sulphuric acid, 66%, commercial, tanks, ton	56.35	56.35	93.69
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.42	1.42	1.45

BUILDING MATERIALS	Latest price	Previous month	Year ago
Lumber, 2x4 fir, mbf, cl	323.45	321.45	306.79
Lumber 2x2, pine, mbf, cl	321.15	319.10	284.47
Plywood, plyform, 3/4", msf, cl	538.05	541.95	581.75
Plywood, 5/8", msf, cl	345.95	351.05	335.38
Cement, bulk, ton, tl	61.89	62.34	62.59
Sand, ton, cl	5.97	5.94	6.03
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	45.85	45.84	46.12
Crushed stone, 1½", ton, cl	7.88	7.88	7.74
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.76	0.75	0.74
Gypsum sheathing, ½"x1"x8", msf. tl	166.40	160.51	154.40
Brick, common, per thousand, tl	172.80	173.55	174.80
Asphalt paving, AC-20	156.72	157.27	162.29
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.63	6.78	6.69

FUELS	Latest price	Previous month	Year ago
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	24.00	23.00	24.75
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	29.75	27.75	31.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.830	0.755	0.880
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.885	0.826	0.855
Heating oil, No. 2, Chi., bulk, gal.	0.803	0.730	0.850
Heating oil, No. 2, N.Y., bulk, gal.	0.778	0.778	0.700
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	24.10	23.25
Jet kerosene, gal.	0.780	0.775	0.840
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.465	0.465	0.340

SCRAP MATERIALS	Latest price	Previous month	Year ago
Steel, No. 1, hvy., dlvd., Pitts., ton	67.00	73.00	64.00
Steel, No. 1, hvy., dlvd., Chi., ton	64.00	73.00	60.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.715	0.690	0.620
Copper, No. 2, East, wholesale buy, dlvd., lb.	0.360	0.600	0.550
Brass, red, East, wholesale buy, dlvd., lb.	0.675	0.650	0.580
Brass, yellow, East, wholesale buy, dlvd., lb.	0.36	0.36	0.35
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	0.355	0.325	0.240
Alum., mixed clip., E., wholesale buy, dlvd., lb.	0.365	0.340	0.250
Zinc, old, East, wholesale buy, dlvd., lb.	0.08	0.08	0.13
Lead, clean solids, East, wholesale buy, dlvd., lb.	0.120	0.12-	0.140
Paper, No. 1 mixed, dlr, N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	20.00	10.00	8.00
Paper, old corrug. box, dlr., N.Y., ton	18.00	10.00	7.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.10	0.10	0.08
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.115	0.115	0.130

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Freight costs: a 3-year forecast

Calling the turn on freight costs—outlays which account for a surprisingly high 10% of the average sales dollar—has never been easy.

But that situation may be changing thanks in part to a new forecasting model developed by Wharton Econometric Forecasting Associates. The big, Philadelphia-based consulting outfit has come up with a specially-designed series (part of its "Industry Service" model) that projects trends in all major transportation modes—including rail, trucks, water, and air.

Wharton believes this is the first time that such a comprehensive rundown on likely rate changes in every key shipping sector has been provided.

Equally important, the new freight series also contains detailed analyses of the factors behind the forecast results. If nothing else, this should make it a lot easier for PMs and other users to gauge their bargaining leverage and evaluate alternatives.

Some of Wharton's latest projections:

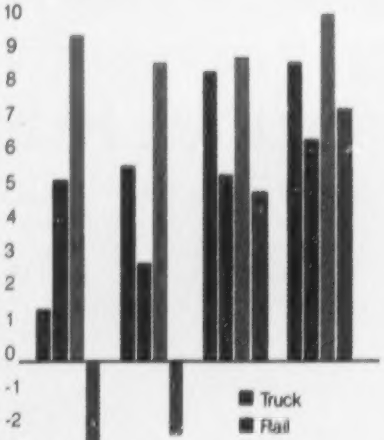
- Discounting will continue to be a way of life, as intramodal and intermodal competition spills over into the 1983-1985 period.
- Biggest increases this year will be in air freight (8.7%), followed by trucking (6.0%), and rail (3.8%). Barge quotes could even decline a modest 2.2%.
- Boosts will show modest acceleration in 1984 and 1985 as demand improves, the general inflation pace quickens, and fuel costs slowly begin to accelerate again.
- Over the 3-year 1983-1985 period, you can expect these average annual increases: air (9.2%), trucking (7.7%), railroads (5.3%), and barges (3.5%).

Forecasting factors

Here's a brief rundown on how the forecasts are built up.

- *The basic series utilized:* Rail numbers are based on the official BLS railroad price index. Truck and barge quotes are derived primarily from BLS data on current and constant-dollar freight revenues. And while air rates are based on previously reported passenger cost data, projections are slanted to take into account only those rate-determining variables that impact on freight operations.
- *The predicting variables:* Cost inputs such as labor, fuel, material, and longrun capital outlays are all given their due weight. So are the pertinent market factors which are specially designed to gauge overall supply-demand influence on tariff-setting strategies.
- *An integrated approach:* Not only are freight rate projections tied into the above "input" variables, but they are linked up with the rest of the economy—thereby permitting forecasted results which are consistent with the latest Wharton macroeconomic (big picture) assumptions on GNP trends, overall industrial production, etc.
- *Simulation capabilities:* As with other mathematical models, the new transportation series are amenable to "what if" analysis. Thus, it is possible to gauge the impact of such developments as a major change in crude oil prices or wage rates.

Projected percentage increases in freight rates



Source: Wharton Econometric Forecasting

A look at such simulation estimates, moreover, can put the importance of these various cost inputs into better perspective. For example, a one-shot, 10% wage increase would have a much greater influence on freight tabs than, say, a similar one-shot, 10% increase in crude oil costs.

The explanation is simple enough. Fuel costs, on average, account for only 3.5% of the transportation industry's total expenditures—in sharp contrast to the 40.1% earmarked for employee compensation. Then, too, a 10% crude oil increase would probably boil down to only about a 4% increase in the type of refined petroleum products used by most carriers.

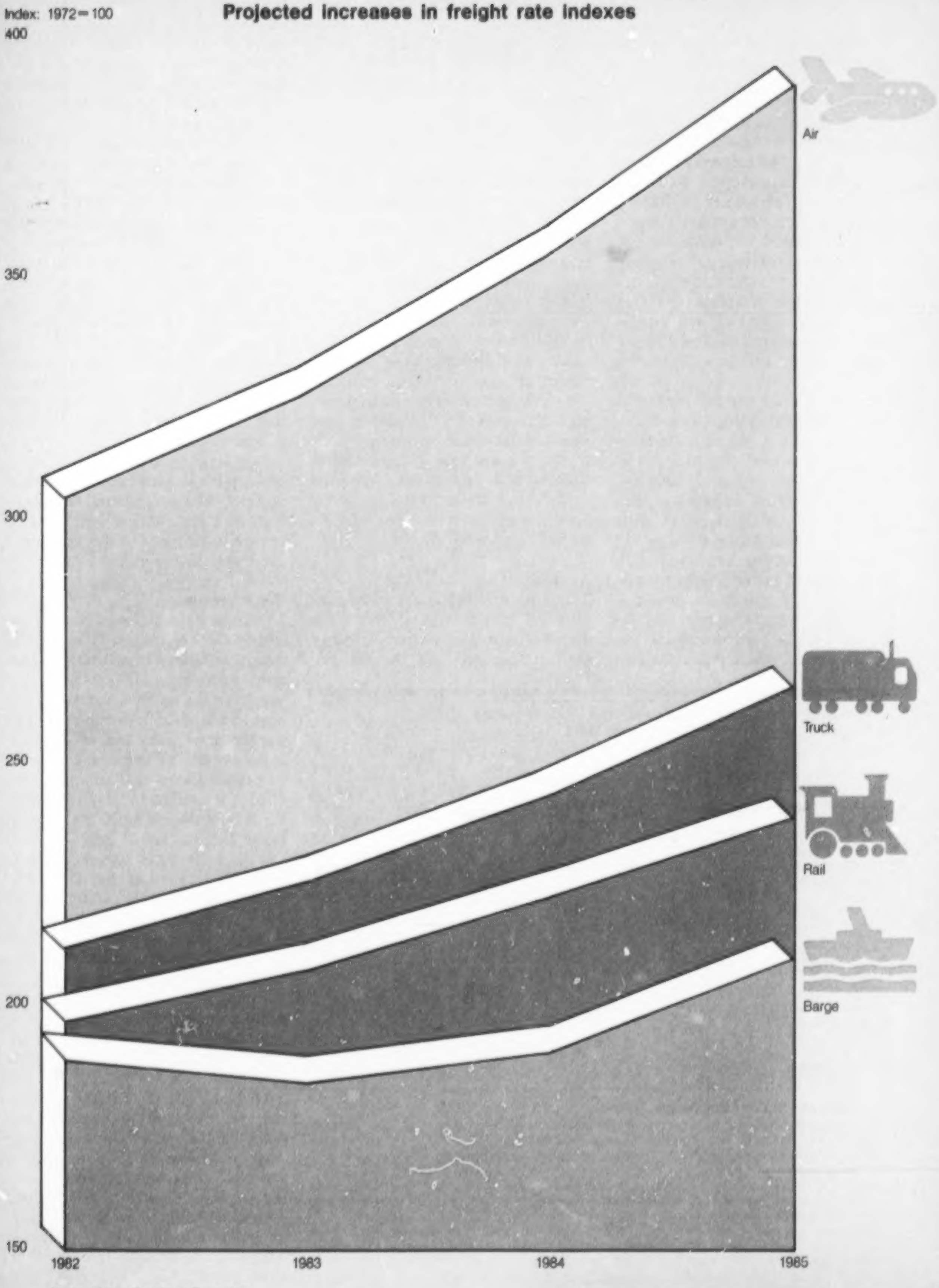
A typical simulation example involving wages is provided in the accompanying table. Note that, other things being equal, a one-shot, 10% wage increase would, within a year, translate into anywhere from a 1.1% increase in the relatively nonlabor-intensive air industry to near 5.6% in the extremely labor-intensive water transportation sector.

- *List versus market prices:* The cost inputs just alluded to are, of course, modified by the supply-demand pressures that most carriers face. On the other hand, such market pressures can't completely take into account the individual discounts or special deals that may be available to individual purchasing managers or transportation buyers.

As such, the projections should be used more as a guideline (the starting point for negotiations) than as the expected final costs you might face.

- *Subjective versus objective input:* While the forecasts are essentially based on the model's equations, they have to be modified from time to time to take into account some of the realities of the marketplace that can't be mathematically quantified. Wharton has a fulltime transportation analyst on its staff to monitor all the nuances of this multifaceted industry.

With all that as background, here's what Wharton sees over the



Projected increases in freight rate indexes

Source: Wharton Econometric Forecasting

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next few years for each of the four major transportation sectors:

Motor freight

Intense competition, lower operating costs, and higher taxes will all affect motor freight rates this year. Factors lowering operating costs include increased use of trailer-on-flat-car transportation, soft crude-oil prices, more favorable labor contracts, and a growing percentage of nonunion (lower wage) drivers in the industry.

While labor and fuel aren't all that great in terms of overall cost, they do constitute 44% and 30%, respectively, of truckers' *operating* costs. Implications: The current wage and fuel cost respite will mean some significant savings for carriers.

On the other hand, motor carriers now face increased "road-use" taxes as well as higher taxes on tires and fuel. The resulting increase in their costs will ultimately be passed on to purchasers of trucking services.

These conflicting forces will allow a 6.0% rise in motor freight rates in 1983. Rates will then accelerate in 1984 and 1985 as a result of increased demand for trucking services and firmer oil prices. Wharton currently forecasts increases of 8.4% and 8.7% in 1984 and 1985.

Railroads

Here, too, increased competition, overcapacity, and lower fuel and labor costs will tend to keep freight rates in check. In addition, the Staggers Act of 1980 has greatly improved the efficiency of rail service by allowing the railroads to merge, contract with shippers, and expand their intermodal capabilities.

Aggressive purchasers, in any case, can take advantage of special backhaul rates, as well as longterm agreements offering lower rates in return for a guarantee of traffic.

In the capital investment sector, high outlays for track improvements and new terminals will be partially offset by a decrease in purchases of railcars and locomotives. Wharton expects rail freight rates to climb 3.8% in 1983 before increasing 5.3% in 1984 and 6.5% in 1985.

Air freight

The airlines currently carry less than 1% of all intercity freight. But as the major passenger airlines expand their freight services, the airlines' share of intercity freight is sure to increase. Demand for air freight services will also expand as shippers turn to faster delivery to keep down inventory costs.

Airlines' costs will climb very little over the near term, owing to falling fuel prices and wage concessions. (Fuel costs constitute 42% of total airlines' *operating* costs, while labor costs represent 36%.)

Despite the cost respite, however, Wharton sees air freight rates jumping 8.7% in 1983—as airlines try to get back into the black. Almost all of this increase, however, will apply to shipments of bulk freight. Small-package shipping is the most competitive segment of the transportation industry, and rates are not likely to rise at all.

But bigger increases are in store beyond 1983. Specifically, increased oil prices and a tightening of the air-transporation market will lead to growth in air freight rates of 8.9% in 1984 and 10.1% in 1985.

Barge freight

Overcapacity and lower fuel prices will be the two biggest factors influencing waterway rates over the next term. As many as 3000 of the 25,000 barges on the nation's waterways are now idle, and 25% of the industry's workers have been laid off.

As a result, shippers have resorted to extraordinary discounting in an effort to maintain traffic levels. Some lines, for example, are offering barge charters for as little as $5.00 just to keep their barges in operation. Under normal conditions, daily charter rates run around $150. Fuel purchases make up 58% of these carriers' expenses, so falling oil prices will greatly reduce waterway carriers' operating costs.

In any event, barge rates will not begin to increase until overcapacity is reduced and fuel costs rise. Indeed, Wharton expects barge rates to fall 2.2% in 1983.

On the other hand, the government is expected to increase user taxes on the nation's inland waterways sometime in 1984 to finance waterway improvements. The resulting increase in carriers' costs, along with a reduction in overcapacity and an increase in oil prices, will cause barge-freight rates to jump 5.1% in 1984 and 7.5% in 1985. ***PW***

The impact of a hypothetical one-shot 10% increase in wages during the first quarter of 1983

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
RAIL TRANSPORTATION PRICES				
original forecast	204.622	209.137	213.129	216.675
alternate forecast	202.996	206.134	209.126	212.087
difference	1.625	3.004	4.003	4.589
percentage change	0.8	1.5	1.9	2.2
MOTOR TRANSPORTATION PRICES				
original forecast	221.212	227.076	232.770	238.098
alternate forecast	219.138	223.235	227.594	232.098
difference	2.073	3.841	5.176	6.000
percentage change	0.9	1.7	2.3	2.6
WATERWAY TRANSPORTATION PRICES				
original forecast	189.275	190.276	191.960	193.908
alternate forecast	185.021	182.606	182.208	183.680
difference	4.254	7.670	9.772	10.229
percentage change	2.3	4.2	5.4	5.6
AIR TRANSPORTATION PRICES				
original forecast	318.678	325.030	332.837	340.713
alternate forecast	318.169	323.610	330.269	336.938
difference	.509	1.420	2.568	3.775
percentage change	0.2	0.4	0.8	1.1

Conclusions and observations

- The overall impacts in all cases are well under 10% because these costs do not constitute that large a portion of overall costs, which, among other things, include capital investment.
- The biggest impacts are in barge rates sector because wages here constitute a bigger portion of overall costs than they do in the other freight sectors.
- Wages generally have more of an impact than does oil because (1) wages constitute a bigger portion of overall costs and (2) a crude oil increase of any given magnitude is generally more than halved by the time it reaches the refined products stage required by carriers.
- Wharton upon request can give a client the actual wage and oil price assumptions underlying its freight rate forecasts. Then, if the client wants estimates based on different assumptions, Wharton can run the requested simulations and provide another set of freight rate estimates.

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Vol. 27, No. 7 - July 1983

Helping you manage the business of buying

6 Publisher's Memo

11 *PW* Predicts
Vote is in on inflation

19 Datatrak
Key economic trends 19
Current prices 20
Steel scene 24
Procurement status 26
Leadtimes 28
Spot market prices 32

36 Value Analysis
Specific techniques to boost effective buying

38 Purchasing Law
Challenges in computerized purchasing

42 Negotiations
Assuring supplier quality

46 Lesson from Japan: No time outs in world markets *
Continual performance improvement is crucial to corporate survival. The techniques in this article can help purchasing better the odds.

51 UPDATE 83

52 *PW*'s consulting economist: Slow growth will continue
55 Top executives: Expect small increases for most prices
58 *PW* readers: First half trend to continue
59 NAPM: At least 12 months of improvement
62 Econometric firms: Inflation estimates revised downward
64 Data Resources, Inc.: Uneven hikes in industrial prices

68 Inbound transportation unit trims 3M costs
Close coordination of purchasing and transportation can reduce inbound freight costs and provide "predictable transportation service."

75 *PW TechFile:* Steam traps
Understanding the various types of steam traps and their applications.

80 New opportunities require new strategies. *
Highlights of NAPM's 68th Annual International Purchasing Conference.

94 Products

138 *PW* Perspective
Everybody wants to be a buyer

* Metalworking issues

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PW PREDICTS

Robert S. Reichard, executive editor

Vote is in on inflation

It's virtually unanimous. The dangers of any new inflationary surge are just about nil—not only for the remainder of this year, but for much of 1984 as well.

The evidence—culled from ***Purchasing World***'s midyear outlook report—is pretty conclusive on this score:

- **Dr. Louis J. Paradiso:** The veteran economist and ***PW*** consulting editor sees only a 6% increase in the GNP price level over the second half of 1983, with just modest acceleration to a 7-8% rate over the first half of 1984. His forecasts for producer finished goods prices over the same two periods are equally reassuring.

- **Econonometric models:** Using the GNP price basis, a compendium of four leading models points to only a 4.7% increase this year and a 5.1% advance for all of 1984. The outlooks for producer price increases are 2.0% and 5.7% over the same two periods.
- **Industrial buyers:** A survey of our readers finds that more than three out of every four expect 1983 procurement cost increases to run in the relatively modest 3-6% range. Further confirmation here comes from the NAPM's Business Survey Committee, where no one expects severe price hikes over the next six months.
- **Vendors:** The average manufacturer is now talking in terms of just a 3.8% increase for the current year—down substantially from the 5½% figure suggested by the same group in January.

Nor does the price situation look all that bad when you go further out. A DRI study on price trends through 1985 suggests a fairly livable inflation rate. And vendors looking at 1983-1986 as a whole, are talking in terms of only a 6% average annual rise.

The close agreement among all these independently determined forecasts is no accident. Factors cited as likely to keep price increases within bounds include:

- **Low operating rates:** Both Dr. Paradiso and DRI, for example, see rates remaining under the 80% level through at least the next 12 months.
- **Restrained labor cost increases:** All sources indicate that unit labor costs (wage gains less the productivity effect) will be a lot lower than they were over the past few years. Best bet: a 4% rise this year and 5% in 1984.
- **Relatively stable energy prices:** Consensus here is for a period of basically stable tags after the declines of earlier this year. This should help keep petrochemical, plastic, and transportation hikes in bounds.
- **Interest rates:** While they're expected to remain at uncomfortably high levels, the fact that they won't be rising suggests no upward impact on price indexes from this important cost input.

Paper

A mixed picture here. The recent $20/ton increase in linerboard (to $270/ton) seems to be holding as operating rates here move up into the 90%-plus range.

On the other hand, look for continued easiness in lightweight coated groundwood paper as (1) still more new capacity comes on stream and (2) compe-

Sulphur

Sulphur and its chief derivative sulfuric acid are on the skids. Frasch producers, for example, have dropped their lists $2.50/ton (to $132.50/ton FOB Tampa). But even this is not the last word—with $10/ton discounts readily available to contract customers.

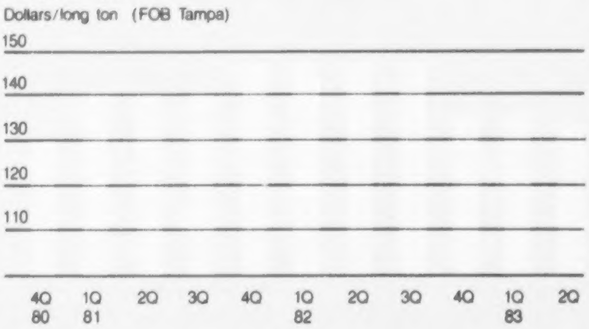
The decline, in large part, reflects increased competition from Canadian imports. These shipments have been coming in at $10-15/ton under previously existing U.S. price levels. And domestic recovered sulphur is reportedly being sold for as low as $95/ton on the Gulf Coast.

Not surprising, all this has had a major impact on demand for Frasch material. Producers have seen their share of the total U.S. sulphur market drop from 52% in the first quarter 1982 to only 46% during the first quarter 1983.

The story is much the same for the acid. Aside from the general sulphur weakness, additional downward pressure has come from Japanese imports where prices under $40/ton have been noted in recent weeks. This compares to a U.S. smelter asking price of $48-52/ton (Gulf Coast) and the $80/ton and higher prices listed for on-purpose acid.

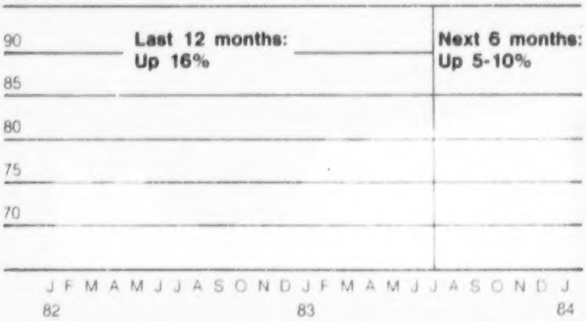
As a measure of the extent of this Japanese competition, the Census Bureau figures that some 75,000 tons of Nipponese acid came in during the first quarter—almost as much as came in during all of last year.

Sulphur prices



Copper

Copper prices
Cents/lb



CURRENT SITUATION: **Prices are now running better than 15% ahead of mid-1982 lows.** But much of the gain came at the beginning of the year—with quotes relatively little changed over the past few months. Behind the relative stability: a combination of offsetting factors—with recent heavy Chinese buying balanced by (1) less-than-anticipated ordering, (2) the increased likelihood of avoiding a major U.S. strike, and (3) the reopening of some previously shut U.S. operations.

DEMAND: **There's been some pickup in ordering by the auto, construction and appliance markets.** But offsets include continued poor demand from the capital goods sector, which traditionally has accounted for as much as half of the metal's overall consumption. **Right now, U.S. usage gains for 1983 as a whole look quite modest (4-5%).** Longterm growth, meantime, doesn't look that robust either—with Free World annual advances put at only around 2% over the next few years.

SUPPLY: **All signs point to continuing more-than-ample tonnages.** Exchange stocks, for example, are at extremely high levels. And judging from current production schedules, total Free World stocks (exchange plus producer) could rise another 250,000 tons this year. **The longer-term outlook also suggests more than enough capacity.** One recent study projects maximum operating rates of 85% through 1984 for mines and smelters.

PRICE OUTLOOK: **No significant nearterm increase would seem to be in the cards,** as the summer demand slowdown and increasing production put a lid on any upward rally. But some creep-up is inevitable toward yearend (if world economies improve as expected)—with quotes at that time moving into the upper-80s range. **As for "dollar" copper—that still seems at least a year away.**

tition from discounted higher basis weight papers intensifies. Elsewhere the recently announced $25/ton boost in newsprint could be in trouble as one firm postponed the effective date until August.

Steel

Rising domestic auto sales (now running well above 6 million units at annual rate (versus under 5 million during part of 1982) are a plus factor. But with capital goods still sagging, third quarter shipments aren't likely to go much above 18.5 million tons. And even if you extrapolate a further fourth quarter gain into the 19.0-19.5 million range—it doesn't look as though the year will top 70 million tons.

As for prices, any drying up of today's still-hefty discounts will be slow as (1) the industry finds it hard to reach a 75% operating rate toward yearend and (2) imports still come in at a better-than-15-million-ton annual clip.

Machine tools

Still a buyers' market here on a combination of cheap imports and lackluster domestic ordering. On the latter score, totals continue to lag yearago levels by more than 20%. Result: plenty of price cutting, with many types of machines said to be going for 20% or more under list.

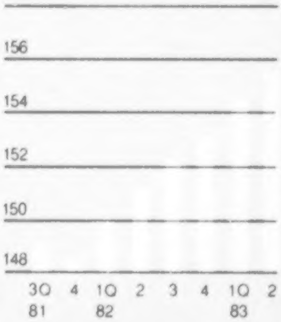
Another sign of easiness: still-dwindling backlogs. At latest report, unfilled orders were off 60% from a year earlier and under the $1 billion level for the first time in a decade.

Office equipment

Plenty of downward pressure as competition heats up and equipment state of the art continues to improve. Examples:

- Volume discounts on PBIs and assorted phone sets—with one firm recently slashing those prices by upwards of 40%
- Competitive infighting in the medium-speed copier market (10,000-50,000 copies per month)—as more and more firms (both domestic and Japanese) move into the fray
- Sharp reductions in computer peripherals, where recent IBM moves have forced vendors of IBM 3270-compatible products to cut prices by as much as 60%.

Office equipment
(Index: 1967 = 100)



Plastic resins

Prices are moving up virtually across the board. True, some of the producer-announced hikes in lists (a few in excess of 6¢/lb) may be overly optimistic. But be prepared to pay 2-3¢/lb more on average for your resins during the third quarter.

Some of the specific plastics going up include polystyrene, PVC, LDPE, HDPE, polypropylene, phenolics, and pipe-grade ABS. And more fourth quarter hikes seem likely as operating rates continue to inch up. *Modern Plastics*, for example, sees these fourth quarter rates: LDPE (95%), HDPE (89%), polypropylene (91%), and PVC (80%).

Lead

Buyers are still firmly in the saddle as inventories (both in the hands of U.S. producers and in LME warehouses) continue to rise. Adding to the overall bearish sentiment is the fading likelihood of major North American strikes and the feeling that demand from battery makers will remain slow for at least another month.

Not surprisingly, most traders feel the metal is unlikely to break out of the low 20s before yearend. The longrun prognosis, however, is somewhat better. New markets (as an ingredient in highway paving, for example) and a somewhat improved auto battery demand are expected to guarantee at least a 2% annual gain.

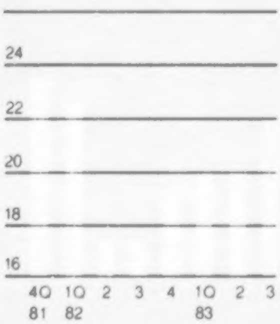
Petrochemicals

A combination of lower inventories, slowly improving demand, and rising feedstock costs suggest somewhat higher second-half 1983 prices. On the feedstock front, for example, spot ethane has moved to above 30¢/gallon, with propane quoted near 50¢/gallon.

In any event, new ethylene postings call for quotes in the 24½-25½¢/lb range—though market prices could settle at considerably under this level (second-quarter material went for only 19¢/lb versus a list of 22¢/lb). Also slated for advances: Butadiene (to a new 35¢/lb list) and propylene (where chemical grade material is now expected to move in the 18½-20¢/lb range).

Ethylene

¢/lb (market price)



Electronic parts

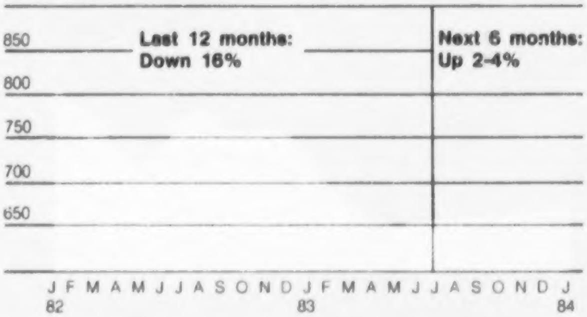
Markets continue to firm. Reason: improving demand. The Semiconductor Industry Association now predicts a 13% increase in global sales this year (to 10.6 billion)—with another 20% jump anticipated for 1984. Zero in on ICs, and this year's gain is put at an even higher 16%—with a 23% increase seen for 1984.

Meantime, scattered price increases are popping up. Bipolar digital logic devices are being hiked 10-20%, and producers of sili-

Petroleum products

Refined petroleum product prices

Index: 1967 = 100



CURRENT SITUATION: Big first-half price declines (15% for both crude oil and refined petroleum products) are just about over. Refined products tags are actually beginning to inch up, reflecting recent seasonal hikes in gasoline. And all signs suggest that OPEC will be able to hold the price of crude at the $19/barrel level. Minor discounting is reported—but only around 50¢/barrel.

DEMAND: Conservation is offsetting increases tied to growth. A recent Energy Department forecast, for example, suggests only a 0.7% increase in overall 1983 oil use (to 15.4 million bpd). Reason: Small gains in distillates (3%) and residual fuel (2%) are being partially offset by a fractional gasoline dropoff. **On the other hand, somewhat bigger increases are anticipated for early 1984 as real growth accelerates.** At that time, U.S. and Free World demand should both be running about 4% above comparable first-half 1983 levels.

SUPPLY: No problems in the refining sector. U.S. capacity in place plus some minor additions should be ample to meet demand through 1990. And for crude, there are still no signs of any longterm resolution of the glut. **Also reassuring: The gradually shrinking percentage of market going to OPEC.** The cartel's production, which peaked at 31.7 million bpd in 1979, will probably only come to about 17.5 million bpd this year (only about one-third of total Free World demand).

PRICE OUTLOOK: Count on a period of relative stability. Some projections on where key quotes might be a year from now: gasoline ($1.20/gal), No. 2 heating oil, wholesale (86¢/gal), No. 6 residual oil ($27.50/bbl). **And no new spiral is anticipated over the longer run.** Most estimates suggest that price hikes will basically stay in line with general inflation.

con wafers are talking in terms of an 8-12% boost by yearend.

Energy

Here are some longterm price estimates, based on a recent DRI computer printout. Figures are for 1983, 1984, and 1985 increases, respectively—all expressed in terms of dollars per million BTUs: Nuclear (1.2, 1.2, 1.1), coal (1.7, 1.7, 1.8), oil (4.1, 3.8, 4.0), natural gas (3.6, 3.4, 3.7).

Nickel

Nickel is managing to stage a modest price recovery.

Quotes are still nowhere near their unrealistic $3.20/lb list level. But gains over the past few months have brought dealer cathode above $2.30/lb—more than 60¢/lb above late-1982 lows.

Where does the alloying and plating metal go from here? Much depends on the LME, because some producers are said to have tied up a portion of their demand with contracts linked to LME quotes.

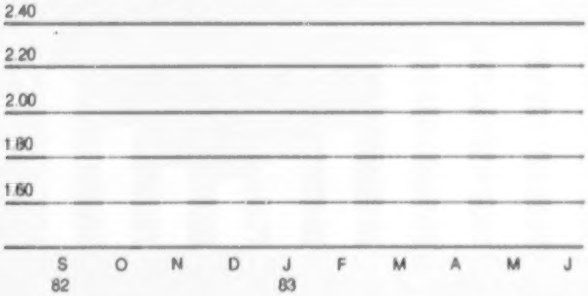
Few, however, see any further nearterm advance on the LME—primarily because the exchange's warehouse stocks have continued to rise. At the end of May, for example, holdings were up at a record 18,700 metric tons.

On the other hand, the longer-term prognosis does look moderately bullish—providing recent demand estimates prove to be correct. On the latter score, one Inco spokesman is now predicting a 10% rise in Free World purchases this year—to 1.06 billion pounds.

As this industry leader puts it, "With considerable production capacity now shut down, prices should rise somewhat if, as we expect, demand continues to increase." He adds, however, that in the short term, excess nickel capacity should keep any further advances to fairly modest proportions.

Nickel prices

Dollars/lb (Dealer cathode)



Source: Metals Week

Aluminum

Price averages should stabilize over the next few months following the spate of recent advances. Reasons: (1) The labor settlement inked last month and (2) the start up of additional capacity (enough to push operating rates back into the mid-60s range).

But the longer-run (fall-winter) outlook is still basically bullish on a combination of Chinese purchases, a 5% increase in global demand this year, and declining inventories. On the latter score, Free World stocks are down 20% from a year ago. Best bet: a bounceback in ingot to the official 76¢/lb list by yearend.

Zinc

Prices look a bit firmer than for its sister metal lead—as auto and construction demand keep consumption above year-ago levels. Inventories, too, remain quite trim—with still another bullish influence coming from increased Chinese purchases (estimated to have run as high as 150,000 metric tons in recent weeks).

Nevertheless, there is little to suggest any major runup, with the metal hard put to reach, much less top, the 45¢/lb level by yearend.

Lumber

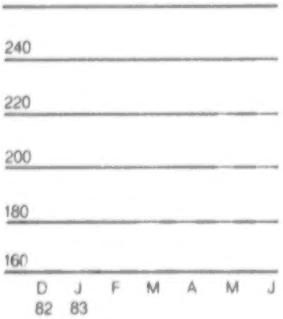
Prices have taken off—reflecting the better-than-50% gain in housing starts so far this year. The benchmark price for softwood, for example, has moved into the $230/mbf range—more than 70% above depressed year-earlier quotes.

And some further uptick can't be ruled out on a combination of (1) low producer and distributor stocks, (2) poor logging weather, and (3) concern over possible strikes.

One other problem: Some companies have been dragging their feet in expanding output because of difficulty in selling byproduct wood chips.

Lumber

$/mbf (2x4s)



Chlorine

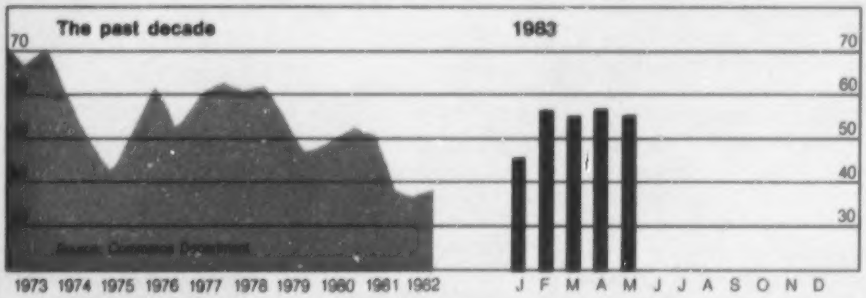
Prices are heading higher again, with off-list quotes moving up as much as $30/ton (into the $145-175/ton range). Behind the advance: (1) an effort to offset sagging prices of byproduct caustic soda and (2) rising demand from downstream chlorine markets.

The price rise is also having the effect of putting upward cost pressure on such chlorine-containing products as PVC, methylene chloride, ethylene dichloride, and hydrochloric acid. ***PW***

BUSINESS DATATRAK

NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



KEY ECONOMIC TRENDS

Business picks up as expected

The 1983 business recovery is proceeding pretty much on schedule.

To be sure, few sectors are experiencing any really big boom and some have actually weakened a bit. But by and large, the overall picture is still one of cautious optimism. The bellwether NAPM business barometer, for example, remains in the mid-50s range—above the "neutral" 50 mark, though still well under the peaks of the past decade.

Zero in on some of the components that make up this and other leading indicators—and the basically upbeat outlook becomes even more apparent. Current stock/sales ratios, for one, have declined to the point where inventories can no longer be considered a drag on the overall economy.

Equally reassuring has been the steady increase in new durable goods orders (top chart, alongside). At latest report, bookings were running some 6% above their early-1982 low point. True, this is nothing sensational. But it does suggest that recent increases in industrial production will continue over the summer months.

Nonindustrial sectors

Consumers, too, have been in a slightly more expansive mood—purchasing new autos at just under a nine million annual rate. Again, that's far from the halcyon pre-recession days—but a lot better than last year when only about eight million vehicles cleared the market.

The housing recovery also shows every sign of continuing. But with mortgage rates at the still-high 13% level (and not expected to decline significantly over the next few months), it would be unrealistic to look for any further meaningful gains in this sector over the next few months.

Capital commitments

Then, too, there are still a few shaky areas. Take capital appropriations (center chart, right). Totals here remain far under levels of a few years back. And, again, it would be the height of wishful thinking to project any meaningful nearterm improvement in this key indicator of future plant and equipment spending—at least not until factory operating rates move above their still-low 70-71% level.

Employment

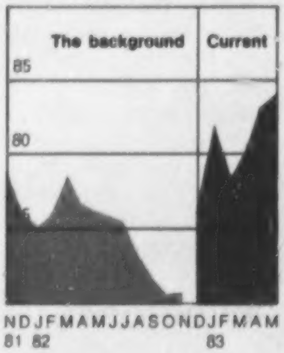
Also on the disappointing side is the continuation of a near-10% unemployment rate. Several factors are probably behind this uncomfortably high level, including (1) new additions to the labor force and (2) the fact that employers, rather than taking on new workers, are instead opting to increase the number of hours worked by people already on the payroll (bottom chart).

Still another possible reason for today's high job-

Leading indicators

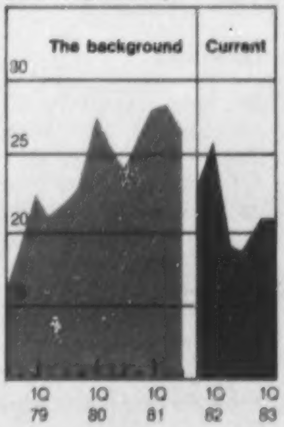
1. Durable goods orders

Billions of $, seas. adj.



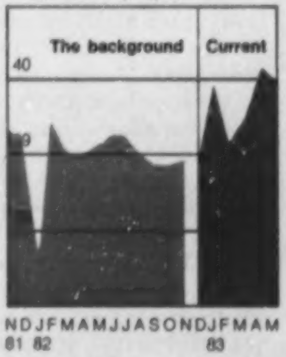
2. Capital appropriations

Billions of $, seas. adj.



3. Work week

Hours, seasonally adjusted



less rate: rising productivity. Advancing at a better-than-4% annual clip during early 1983, improving efficiency is permitting managers to postpone the hiring of additional workers.

But while this productivity factor is temporarily limiting the reduction of the overall unemployment rate, it has its brighter side, too—namely by providing a hefty offset to any new wage boosts—thus holding unit labor cost advances (and hence inflationary pressures) to very modest proportions.

Inventories now at favorable levels

Business inventories are now in the best shape they've been for years.

Lest there be any doubt on this score, take a look at the accompanying chart which zeros in on purchased materials—the sector that reflects holdings on the bellwether purchasing level. Specifically, stock/sales ratios (calibrated in real terms) have been declining.

The dropoff is most notable in the highly volatile durable goods sector. Indeed, some 13 percentage points have been knocked off the ratio here since last November. And preliminary late-spring data suggests the trend has continued into June.

That's not to say that inventories over the past month or two have continued to fall. Rather they are stabilizing—and when combined with generally rising factory shipments, it suggests that the ratios are now even lower than shown on the chart.

Positive impact

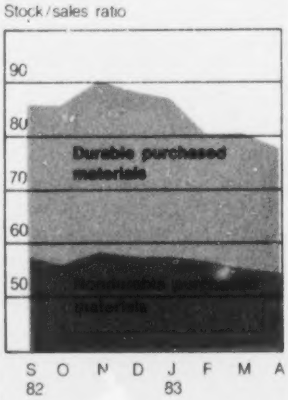
All this has to have a positive impact. As one Commerce Department official recently summed it up, "With a dwindling backlog of unsold goods, vendors will have to step up output if they're to meet improving demand and keep leadtimes from rising."

Equally important, the business pickup will eventually require some inventory additions, too. Dr. Louis J. Paradiso in his new midyear outlook sees the 7-8 billion decline in real business inventories (at annual rate) over the first half of 1983 shifting into an almost-as-large accumulation over the second half of the year.

Keep in mind: That's a $15 billion swing—enough to add about 1% (again at annual rate) onto the real GNP growth rate over the next six months.

How inventories have been pared

(Months' supply in real terms)



Source: Commerce Dept

Import price trends
(% change during 1st quarter 1983)

Crude petroleum	-7.2	Textiles	0.6
Tires and tubes	-1.1	Fasteners	0.6
Paper and board	-0.4	Motors and generators	5.7
Pig iron, ferroalloys	-7.8	Textile machinery	2.9
Steel bars, rods, angles	-3.1	Machine tools	5.3
Steel sheets and plates	-0.4	Pumps and compressors	2.2
Steel tubes and pipe	-1.5	Valves	2.5
Locksmith wares	-5.0	Clutches and transmissions	4.2
Electric machinery	-0.5	Office machines	0.9
Household appliances	-2.0	Autos	1.3
Cycles	-2.6	Furniture	1.8
Clothing	-1.0	Instruments	2.2

Source: Bureau of Labor Statistics

Bottom detected for import prices

Import tags, as measured by Uncle Sam's price watchers, are beginning to bottom out. To be sure, some product lines are still edging lower. But for the first time in years, some tags are again on the upswing.

Behind the end of the long slide: (1) a stabilizing dollar, (2) some pickup in the domestic demands of the exporting countries, and (3) growing cost pressures. The accompanying table provides the details over the latest 3-month period, but the basic trends can be summarized along these lines:

- **Intermediate manufactured products:** Averages advanced 1.3% above the first quarter of 1983 after registering declines in each of the previous four quarters. Tags for nonferrous metals moved up sharply. The index for cork and wood manufacture moved up 3.3%, and textile quotes firmed slightly after two straight years of decline.

In contrast, prices still dropped for iron and steel (-2.0%), paper and paperboard (-0.4%), and rubber manufactures (-0.2%).

- **Machinery and equipment:** The overall index in the first quarter advanced 1.7%—the largest increase in 15 months. Road vehicles, the single largest component, also rose 1.7%. All other categrories also increased—except electric machinery which dropped 0.5%.
- **Miscellaneous manufactured articles:** Again, a rather mixed picture. Declines were noted for clothing (-1.0%). But increases were recorded for plumbing, heating and lighting fixtures (1.8%), instruments (2.2%), and photo, optical goods, and watches (2.4%).

CURRENT PRICES

Average prices inch up

Industrial prices are beginning to inch ahead again.

But the inceases for the most part are quite modest. In fact, the overall average advance for the latest available month comes to only 0.4%—the equivalent of less than 5% at annual rate.

Much of the rise can be traced to a firming in the heretofore weak energy sector—with increases over the latest 30-day period racked up in home heating oil, gasoline, liquid petrolem gas, kerosene, and electric power. These were more than enough to affect declines in residual fuel oil, lubricating oil, and natural gas.

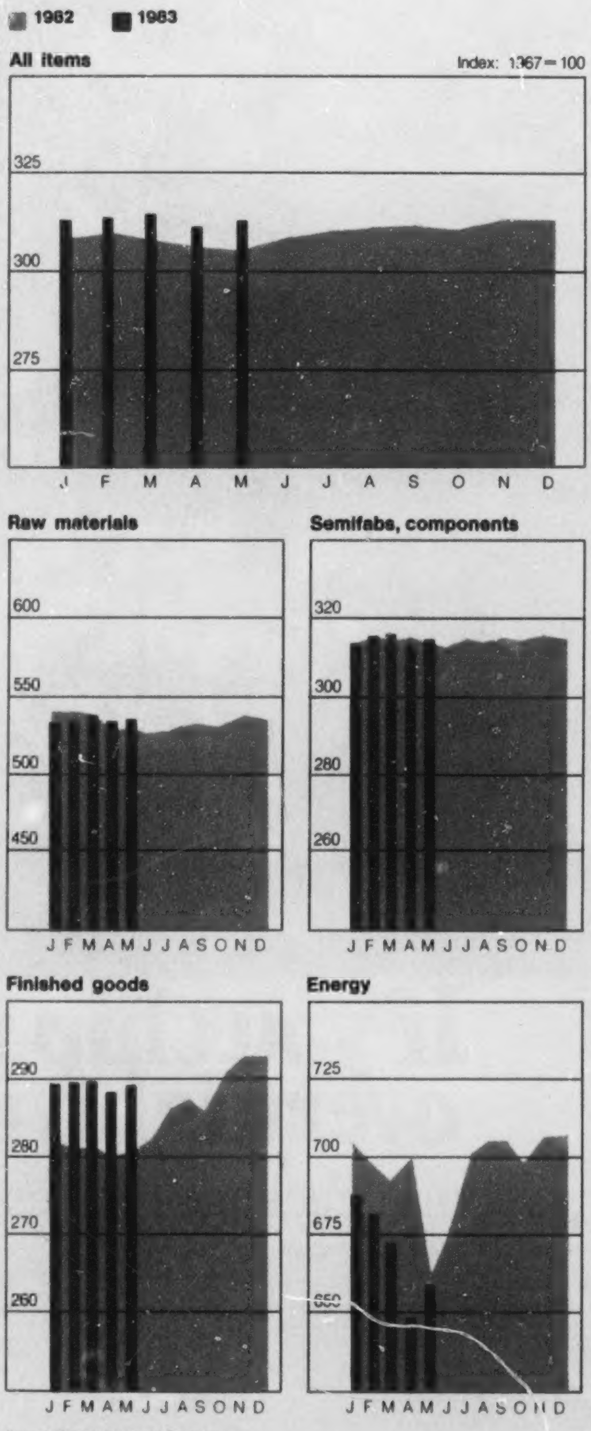
Construction materials—sparked by the better than 50% rise in housing starts so far this year—also played a role in the overall gain. Price boosts, for example, were recorded for softwood lumber, plywood, plastic construction materials, and gypsum products.

A similar modest upward trend was noted in capital equipment—with hikes posted in rail equipment, machine tools, mining machinery, aircraft,

This month's breakdown

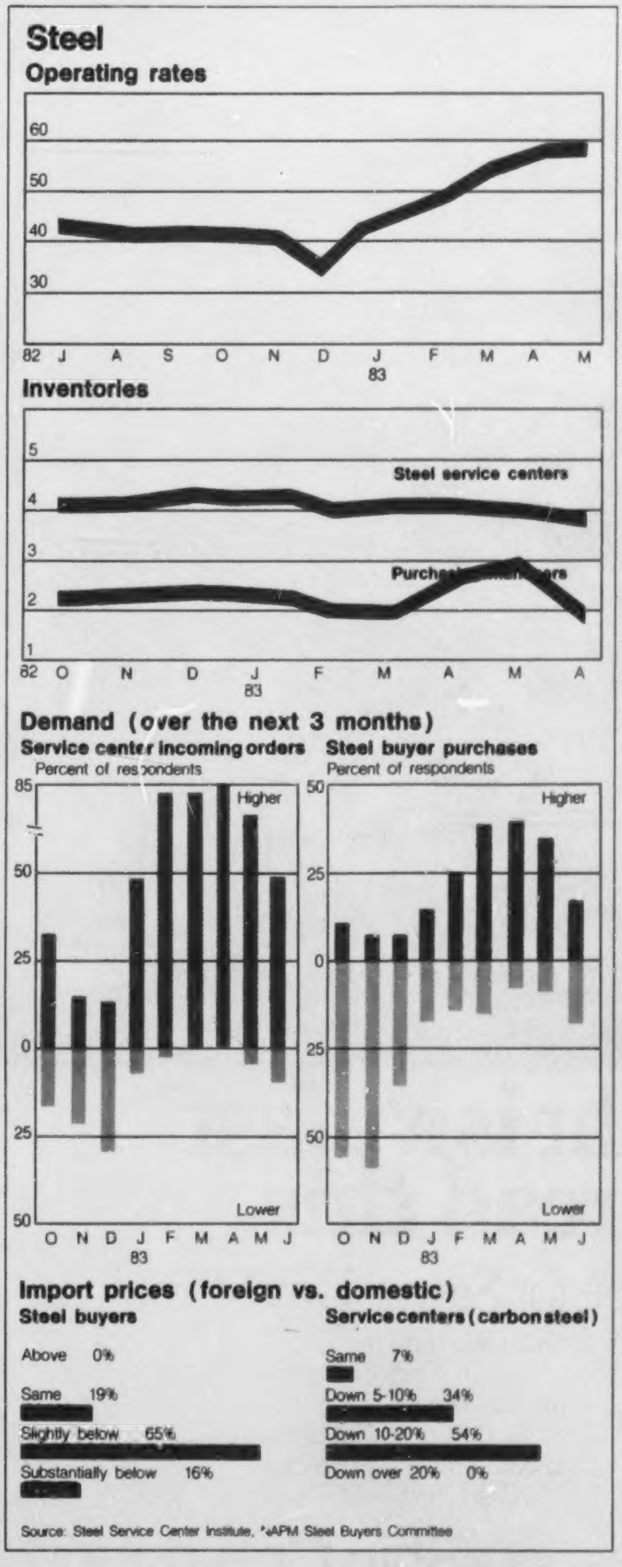
	Latest level (May)	% change from: Month ago	Year ago
Bearings	331.2	0.0	0.8
Bolts, nuts, etc.	265.9	-1.1	-1.8
Chemicals, inorganic	300.6	0.1	-4.9
Chemicals, organic	358.2	0.0	-4.8
Concrete products	301.0	0.2	0.9
Corrugated cartons	240.0	0.2	-2.8
Cutting tools, small	280.2	0.4	1.1
Electrical instruments	270.1	0.7	7.6
Electric lamps (bulbs)	307.4	-0.9	6.7
Electronic components	180.1	-0.1	2.6
Fans and blowers	336.9	0.2	0.5
Foundry and forge products	352.3	0.1	1.7
Fuel oil (residual)	1052.5	-3.1	-11.7
Furniture, commercial	286.6	0.0	4.1
Gasoline	587.4	4.1	-3.6
Glass, flat	229.7	0.0	1.5
Glass containers	351.8	-0.6	-1.8
Gypsum products	275.3	1.4	6.1
Hand tools	344.8	-0.1	2.3
Hand tools, power driven	221.0	0.0	-0.5
Industrial furnaces	360.1	-0.3	2.2
Integrating and measuring instruments	223.1	1.2	5.5
Internal combustion engines	342.7	0.7	5.0
Lubricating oil	774.4	-1.8	-12.8
Lumber millwork	298.8	-1.3	8.1
Material handling equipment	284.8	0.0	-1.0
Metal containers	337.4	1.6	2.2
Metal mill shapes (nonferrous)	310.5	1.5	3.8
Metal tanks	307.0	0.2	-1.7
Motors and generators	324.2	0.8	5.9
Motor trucks (10,000 lb and under)	317.6	0.0	5.5
Office and store equipment	154.5	-0.2	2.3
Paperboard	248.9	0.2	-3.8
Paper boxes and shipping containers	247.1	0.2	-1.5
Paper office supplies	226.8	0.0	1.6
Paint	265.1	0.0	0.2
Plastic resins	285.4	0.2	0.8
Precision measuring tools	245.4	0.2	2.8
Pumps and compressors	347.8	-0.1	-0.4
Refractories	338.7	0.0	-0.2
Rubber belts and belting	330.8	0.3	1.4
Scales and balances	227.7	0.6	1.2
Steel products	347.3	0.0	-1.0
Switchgear	268.6	0.0	1.7
Textiles, synthetic fibers	157.2	1.2	-3.8
Textiles, gray fabrics	146.0	-0.1	0.1
Tires and tubes	246.5	0.0	-3.3
Transformers and power regulators	223.4	-0.9	0.3
Welding equipment	273.7	-0.1	0.4
Wire and cable	206.2	0.2	-0.6

Industrial prices at a glance



Source: Bureau of Labor Statistics

BUSINESS DATATRAK



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

generators, and instruments. But some easing was noted in transformers and industrial furnaces.

Metals, too, moved up a bit over the past month—particularly in the nonferrous area. But preliminary reports for the current month suggest that these tags have again begun to level off—probably reflecting the normal summer demand lull.

More mixed performances were noted in chemicals, papers, and textiles. On the other hand, all three of these seem poised for some modest firming by fall as the supply-demand gap slowly closes.

But government price watchers hasten to add that any new increases in these or other industrial sectors will be small. As one BLS official put it, "There's just too much idle capacity hanging over the market to permit any big across-the-board boosts—anywhere—over the next 3-6 months."

STEEL SCENE

Steel recovery losing steam

Steel demand doesn't look quite as buoyant as it did just a few short months ago.

Sign of the times: Only about 18% of the buyers queried in the latest NAPM steel survey expect to increase their receipts of the metal over the next few months—down significantly from the 42% high of two months earlier, and just barely enough to offset the 18% who say they may actually cut back on deliveries.

To be sure, distributors responding to a new Steel Service Center Institute (SSCI) query are a bit more optimistic—with 48% anticipating increases in incoming orders over the next three months. But even here there has been some modest scaling down from two months earlier when 85% were talking in terms of increased sales.

Spotty improvements

Distributor feeling is summed up by Andrew G. Sharkey, SSCI president, who feels that the remainder of 1983 is likely to show a saw-tooth, inconsistent pattern on a month-by-month basis.

But despite all the unevenness, the consensus still calls for a fair-sized steel distributor shipment gain when the dust finally settles on 1983—with Sharkey putting the advance in the 10% range. Some steel men even suggest a bigger advance; one mill spokesman puts shipments to the service centers up by about 25%.

Inventories

But this latter estimate could be overly optimistic—especially if one looks at current inventory planning. True, steel stocks on both the distributor and buyer fronts now seem to be in fairly good shape. But both groups still seem intent on further tightening.

Some 27% of queried buyers, for example, feel their inventory levels are still too high relative to demand—versus not a single PM who thinks that they're too low. And they may do something about it. The 24% who plan to reduce holdings far outweighs the small 3% who now contemplate additions.

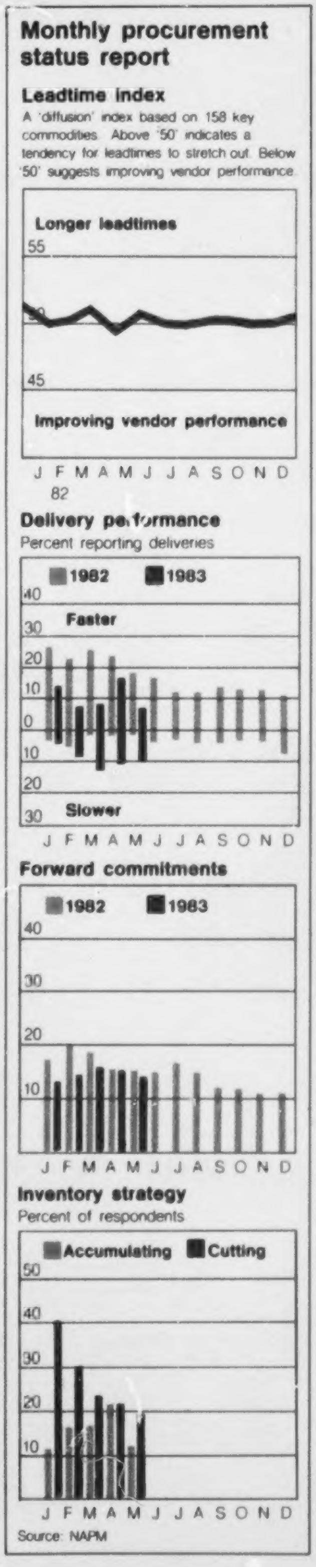
The inventory picture is much the same for service centers. The ratio of too-high to too-low inventories is running above 7:1, and plans to cut stocks are topping plans to increase them by a 4:1 margin.

Import influence

Low-priced foreign steel also will continue as a major factor in holding down domestic mill shipments. Once again, survey respondents tell the story—with 16% of the buyers now noting that foreign steel is "substantially below" comparable domestic levels.

This, too, is confirmed by service centers. Nearly three out of five say carbon steel imports carry price breaks of 10-20%. The situation is even more competitive for stainless as virtually everyone agrees that incoming foreign steel is cheaper—with 13% putting the price advantage in excess of 20%.

All this is apparently having an effect on import strategy. Survey results suggest that buyers may actually increase their dependency on imported steel over the next six months—with little change indicated on the part of service centers who already purchase a considerable portion of their tonnage from overseas vendors.


Monthly procurement status report

Leadtime index

A 'diffusion' index based on 158 key commodities. Above '50' indicates a tendency for leadtimes to stretch out. Below '50' suggests improving vendor performance.

Delivery performance

Percent reporting deliveries

Forward commitments

Inventory strategy

Percent of respondents

Source: NAPM

PROCUREMENT STATUS

No serious problems on leadtimes

Leadtimes remain remarkably short, despite continued increases in demand and the reluctance of vendors to add to both their workforce and their finished goods inventories.

That's not to say that there hasn't been some overall stretchout. But it's been fractional. ***PurchasingWorld's*** leadtime index has inched up only to the 51 level, just one point above the neutral 50 mark.

The NAPM Business Survey Committee's latest findings here suggest that while the number of respondents experiencing slower deliveries (10%) is slightly more than those getting faster service (6%), the vast majority (84%) report little or no meaningful change.

Indeed, zero in on some areas, and there has actually been some decrease in leadtimes. This is especially true of some capital goods items such as machine tools, for which backlogs have all but disappeared. Equally significant, even items where demand has improved substantially (such as electronic parts), there has been little or no stretchout.

Talks with PMs suggest several reasons for the absence of any serious problems—in marked contrast to the delivery extensions usually associated with a business pickup. These include (1) the gradualness of the upturn (allowing vendors more time to react), (2) more-than-ample capacity, and (3) continued cautious inventory policies on the part of buyers.

The latter is also confirmed by the latest NAPM business survey. That report finds (1) still more people are cutting than adding to stocks, and (2) 90-day-or-more forward commitments for production materials are noted by only 13% of the respondents—actually down from the 14-15% readings of the two previous months. ***PW***

Leadtimes and availability

Chicago: Some fair-sized reductions in steel—with these new weekly leads: c-r sheet (8-9), galvanized (6-8), aluminized (4-5). Steel plates are out a bit (to 2-3). Ditto, bars and structurals (2-3). Elsewhere: Coming in are aluminum coil and sheet (10-12) and brass and copper rods (3-4). But copper sheet is out to (5-6).

Cleveland: Slightly longer waits (now 8-10 weeks) for cold-finish aluminum. Ditto, for PVC resins (now out to 2-3). But little change in such other key items as lumber and plywood (3), plastic shrink film (3), strapping (2-3), multiwall paper (8-10), glassines and grease-proof papers (4-5), and alloying materials (on demand).

Los Angeles: Basically offsetting changes here. Coming in (to these new weekly leads): galvanized steel (4), pumps (9-11), fasteners (4), custom storage tanks (7-8), heavy duty aluminum sheet (13), heavy duty electronics (13). But out are copper tubing (6-7), copper fittings (5-6), rubber hose (5-7), and aluminum (5-6).

BUSINESS DATATRAK

Houston: Leadtimes on turbogenerators have shortened (from the previous 13-16 months to 6-16). Not much change on other capital goods and heavy construction items—primarily because no one is ordering. MRO items all remain stable at 2-4 weeks. Ditto packaging (2-4), electronic parts (4-6), and corrugated (2-4).

Philadelphia: Some stretchouts here—with these new higher weekly leads: stainless bar (5-7), standard stainless rod (4-6), standard stainless tube (6), and carbon bar (4-5), polyethylene bags (1-2), choice white greases (1), aluminum from mill (8). But sodium sulfate has come in to 1 week because of vendor storing.

Pittsburgh: Some minor increases in leads (to these weekly units): laminating paper (3-8), coil coating paint (4), and tin purchases of 10,000 lb (3-12 but averaging out near 7). Unchanged are most alloying materials (2), multiwall bags (6), all types of drums (1), polyethylene and PVC (4), and steel strapping (2-3).

Leadtimes (in weeks)

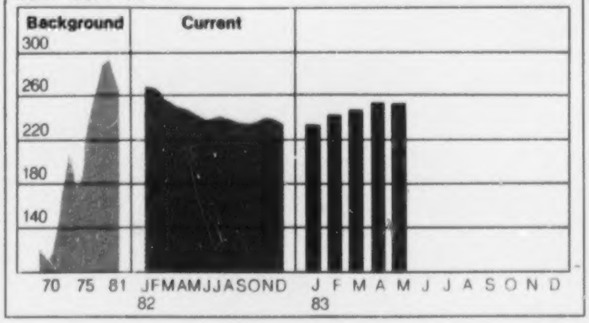
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	7	5	5
C-R Sheet (Chgo)	8½	13	4½
Plate (Phil)	4½	4½	4½
Plate (Chgo)	2½	2	2
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	4½	3½	5
H-R Bars (Chgo)	2½	2	2
Cold-Drawn Bars (Phil)	4½	6	6
Galvanized (LA)	4	9	5½
Galvanized (Chgo)	7	9	4½
Structurals (Chgo)	2½	2	2
Structurals (Hous)	17	17	17
Tubing (Phil)	6	6	19
Grey Iron Castings (LA)	12	12	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	7	7	7
Pipe, Carbon (Hous)	13	13	26
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	8	5	9
ICs (Linear) (Phil)	11	11	12
Motors (Phil)	21	21	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	7	7	7
Relays (Chgo)	15	15	15
Resistors (Chgo)	10	10	10
Resistors, Wirebound (Phil)	10	10	10
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	2½	2	2
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	1/5	1/5	1/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	1
Naphthalene (Chgo)	2	2	2
Paint (LA)	4½	4½	5
Paint, Coil Coating (Pgh)	4	3	3
Paint, Maint. (Clev)	2	2	1½
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	2½	2	2
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	1	1	½
PVC Resin (Pgh)	4	4	4
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	4
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	4½
Cartons, Corrugated (Clev)	3	3	3
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	4½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	4	4	5
Shrink Film (Clev)	3	3	3
Drums, Fiber (Pgh)	1	1	3½
Drums, Steel, Std. (Pgh)	1	1	2½
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	11	13	7½
Aluminum Plate (Chgo)	9	9	7
Aluminum Sheet (LA)	5½	5	5½
Aluminum Sheet (Chgo)	11	12	8
Brass Castings (LA)	8½	8	7
Brass Rods (Chgo)	3½	4	2½
Brass Sheet (Chgo)	5½	4½	5
Brass Tube (Chgo)	5	5	9
Copper Fittings (LA)	5½	5½	4
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	6½	4	4
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	3
Wire, Specialty (LA)	5	5	4½
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	12	12	22
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	52	52	56
Compressors, Reciproc. (Hous)	39	39	45
Fasteners (Chgo)	½	½	½
Fasteners (LA)	4	6	5
Fasteners, Std. (Phil)	3½	3½	3½
Heat Exchangers, Carbon-alloy Steel (Hous)	30	30	30
Heat Exchangers, Hi-pressure (Hous)	43	43	43
Insulation Mat'l. (LA)	9	9	4
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1	1	1
Pumps (Hous)	41	41	41
Pumps (LA)	10	12	10
Rubber, Synthetic (LA)	2	2	1½
Rubber Hose (LA)	6	5	6
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	8	8	13
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month	**251.5**
Month before	**253.2**
Year ago	**245.5**

Index: 1967 = 100



Latest spot market prices

FERROUS METALS	Latest price	Previous month	Year ago
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	347.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	22.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	22.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	24.40
Steel, bars, dlvd. Phila., cwt., merchant quality	17.50	17.50	14.35
Steel, bars, Pitts, cwt.	17.50	17.50	14.35
Steel, bars, C.R., Pitts, cwt.	26.00	26.00	31.00
Steel, plates, Pitts., cwt.	25.75	25.75	24.25
Steel, plates, H.R., Pitts., cwt.	25.75	25.75	24.25
Steel, sheets, C.R., Detroit, cwt.	26.15	26.15	24.65
Steel, strip, C.R., Chi., cwt.	29.05	29.05	29.05
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.695	0.650	0.430
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	4.95	4.95	4.60
Brass, red, 85%, [sheet], lb.	1.29	1.30	1.17
Brass, yellow, [sheet], lb.	1.23	1.24	1.11
Cadmium, ton lots, lb.	1.15	1.00	1.10
Copper, electrolytic, wire bars, refd., lb.	0.80	0.82	0.74
Copper sheet, over 24 in., lb.	1.38	1.39	1.28
Lead, common, N.Y., lb.	0.195	0.210	0.250
Magnesium, pig ingot, [99.8%], lb.	1.38	1.34	1.34
Mercury, 20 fl. lots, N.Y., fl.	300.00	325.00	365.00
Molybdenum Climax Oxide/bags, lb.	4.65	4.65	8.50
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	11.09	12.40	6.44
Tin, Straights, N.Y., lb.	6.63	6.84	6.53
Zinc, Prime West, East St. Louis, lb.	0.40	0.40	0.35
Zinc, die casting alloy, No. 3, lb.	0.465	0.465	0.415
PAPER			
Uncoated book 13 offset, ton	680.00	680.00	800.00
Watermarked bond, ton	845.00	845.00	845.00
Gummed sealing tape, carton	15.50	15.50	15.70
Boxboard, mach. clay ctd. recycled sheets 80 bright, .016, ton	475.00	475.00	475.00
Wrapping paper, std. distribution cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	270.00	270.00	270.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.246	0.241	0.240
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	0.99	0.97	1.00
Cotton middling, 1", N.Y., lb.	0.704	0.659	0.604
Printcloth, 48", 80x80, N.Y., spot. yd.	0.58	0.58	0.63
Army duck, 37", 13 oz., yd.	1.63	1.60	1.70
Blended printcloth, 64", 78x54, yd.	0.670	0.670	0.590
20s combed yarns	1.72	1.68	1.72
Wool tops, N.Y., lb.	3.60	3.60	3.60

CHEMICALS	Latest price	Previous month	Year ago
Acrylonitrile, tanks, lb.	0.43	0.43	0.46
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	150.00	150.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.50	1.46	1.52
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.66	0.66	0.66
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	0.106	0.106	0.101
Glycerine, synthetic, tanks, lb.	0.730	0.730	0.805
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.715	0.715	0.715
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.275	0.245	0.420
Polyethylene resin, low density liner film grade (market price), lb.	0.35	0.30	0.27
Polypropylene, homopolymer grade (market price), lb.	0.38	0.35	0.38
Polystyrene, general purpose grade (market price) lb.	0.39	0.39	0.38
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.300	0.300	0.375
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	132.50	135.00	147.50
Sulphuric acid, 66%, commercial, tanks, ton	56.35	56.35	93.69
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.33	1.42	1.45
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	333.85	323.45	307.49
Lumber 2x2, pine, mbf, cl	333.15	321.15	284.55
Plywood, plyform, 3/4", msf, cl	540.80	538.05	581.05
Plywood, 5/8", msf, cl	345.15	345.95	329.79
Cement, bulk, ton, tl	61.89	61.89	62.42
Sand, ton, cl	5.97	5.97	6.07
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	45.78	45.85	45.77
Crushed stone, 1½", ton, cl	7.89	7.89	7.86
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.76	0.76	0.74
Gypsum sheathing, ½"x1"x8", msf, tl	168.09	166.41	154.57
Brick, common, per thousand, tl	172.30	172.90	175.60
Asphalt paving, AC-20	156.72	157.72	161.57
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.63	6.63	6.62
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	23.30	24.00	25.75
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	29.75	29.75	31.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.875	0.830	0.920
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.885	0.885	0.956
Heating oil, No. 2, Chi., bulk, gal.	0.798	0.803	0.945
Heating oil, No. 2, N.Y., bulk, gal.	0.853	0.778	0.943
Heavy fuel, PS 400, Los Angeles. rack, bbl.	26.50	26.50	25.10
Jet kerosene, gal.	0.780	0.790	0.900
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.490	0.465	0.340
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	72.00	67.00	59.00
Steel, No. 1, hvy., dlvd., Chi., ton	69.00	64.00	50.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.680	0.715	0.553
Copper, No. 2, East, wholesale buy, dlvd., lb.	0.600	0.630	0.458
Brass, red, East, wholesale buy, dlvd., lb.	0.640	0.675	0.493
Brass, yellow, East, wholesale buy, dlvd. lb.	0.385	0.360	0.330
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	0.390	0.335	0.230
Alum., mixed clip., E., wholesale buy, dlvd., lb.	0.420	0.365	0.240
Zinc, old, East, wholesale buy, dlvd., lb.	0.090	0.080	0.125
Lead, clean solids, East, wholesale buy, dlvd., lb.	0.110	0.120	0.140
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	20.00	7.00
Paper, old corrug. box, dlr., N.Y., ton	20.00	18.00	6.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.10	0.10	0.06
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.36	0.36	0.34

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

UPDATE 83

Compiled by Robert S. Reichard, executive editor

PurchasingWorld's new midyear look at the economy contains no really big surprises. By and large, the current business upturn is expected to continue at the current pace over the remainder of the year—though there are still some questions about the extent of the gains beyond that period. Price restraint also looks to remain the order of the day—but with some modest acceleration likely toward yearend and early 1984 as supply and demand slowly come back into better balance.

The following special section—viewing the outlook from six separate vantage points—fills in all the pertinent details:

***PurchasingWorld's* economic consultant**—Consulting editor on economics and business, Dr. Louis J. Paradiso, provides his usual lucid comments and predictions on real growth, prices, inventories and other key indicators of crucial interest to PMs.

***PurchasingWorld* survey**—Questionnaires sent out to hundreds of our readers add insight as to how top purchasing executives view nearterm business trends.

Vendor perspective—A recently released survey indicates how the top brass see prices and demand changing in close to 20 key industrial areas.

Econometric model perspective—The results of four of the nation's top mathematical models are presented—all of which are now in surprisingly close agreement on both 1983 and 1984 trends.

Product-by-product rundown—This is the latest in a continuing series of DRI analyses detailing price trends for more than a score of items—not only for this year but also for 1984 and 1985.

***PW*'s consulting economist**

Slow growth will continue

"We're still not completely out of the woods."

That's the warning being sounded by ***Purchasing World*'s** economic consultant, Dr. Louis J. Paradiso. To be sure, the veteran business analyst continues to project some fair-sized GNP gains over the next two quarters. But beyond that point, he has some serious reservations.

Specifically, Paradiso, taking his regular midyear look into the crystal ball, feels that early 1984 increases may be considerably harder to come by as interest rates, the Federal deficit, and unemployment all remain way too high for comfort.

That's not to say he sees a new recession ahead. Rather, the thrust of Paradiso's analysis is that a slowdown could well be in the making by as early as the first quarter of 1984—one that would hold the real GNP gain that year to well under the 4-5% rates now being bandied about in Administration circles.

In fact, Paradiso's outlook is not quite so optimistic as many other forecasts coming out these days. But his past record of accuracy provides ample reason to consider his views. The econometric forecasts quoted later in this section, for example, present a slightly rosier picture in several key areas. And little talk is heard anywhere of a slowdown in 1984. Even so, Paradiso's analysis should help PMs stay alert to the factors at work.

Here are some of the veteran analyst's cogent comments and observations along with detailed projections through mid-1984 for all key sectors of the economy.

Real growth: Big nearterm pluses include modest replenishment of inventories, some consumer buying pickup following the scheduled summer personal income tax cut, modest income increases, and a fairly large jump in housing activity.

Some of the positive effects, however, will be offset by still-relatively-weak plant and equipment buying, lagging net exports, and curtailed government purchases. But these problem areas won't be strong enough to prevent a 5% annual rate of growth over the third and fourth quarters.

Viewed from another perspective, the gain from the fourth quarter 1982 to the fourth quarter 1983 should be something around 4%—and the overall 1983 average (vis a vis the 1982 average) should be about 2.3%.

But prepare for some possible slowdown beyond that point as (1) prices begin to accelerate a bit, (2) interest rates show a tendency to rise, and (3) major sources of demand lose some of their vitality.

Thus, the projected increases in real GNP at annual rate for the first and second quarters of 1984 are put at only 3% and 2%, respectively. On the other hand, this could prove somewhat on the low side if (1) Congress cuts defense spending more than currently anticipated and (2) the Fed maintains its "cool" and keeps interest rates from rising.

Prices: Four basic factors are behind the current relative stability: (1) competitive markets engendered by overcapacity, (2) reduced wage cost pressures, (3) recent declines in energy, and (4) moderation in food price increases. All told, these suggest that the GNP deflator will rise at only a 5.5% rate in the third quarter and 6.5% in the fourth quarter.

But the first half of 1984 could see substantially higher increases—something in the order of 7-8% at annual rate—on a combination of improved factory operating rates, higher raw material prices, some modest advances in energy, and higher employer Social Security taxes that must eventually be recouped.

Producer finished goods prices are likely to follow a similar pattern as energy prices slowly increase, food items become more expensive, and improved economic activity jolts the prices of some industrial products upward. Increases at annual rates may range from 4% in the third quarter to 7% in the fourth.

Even so, producer prices may average only 2.3% above 1982 for the year as a whole. But higher rates, ranging from 7 to 7½%, are likely during the first half of 1984 as costs begin to creep up again.

For these same reasons—plus continuing strong increases in the prices of many services—consumer prices may pick up after the small decline of the first quarter of 1983. The annual rate of increase may reach 6% and 8% in the third and fourth quarters, respectively.

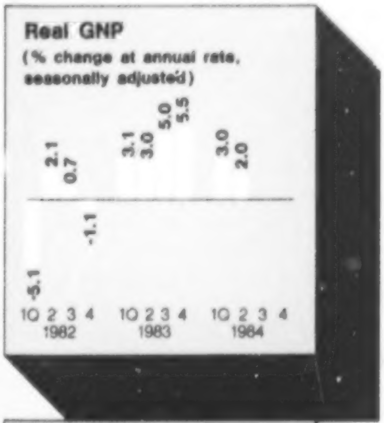
For 1983 as a whole, this suggests about a 3.6% increase relative to last year's average—a considerable improvement over 1982's near-6% advance. But the momentum of higher prices in the latter part of 1983 should spill over into 1984, with the cost-of-living index advancing 7½-8½% over the first six months of that year.

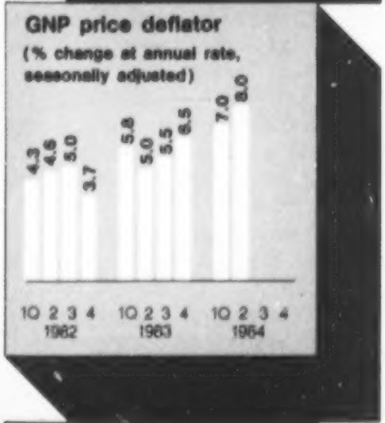
Wages and productivity: Continuing high rates of unemployment will help hold down the private nonfarm wage rate increase to only 6% this year (versus 7.3% in 1982). Not too much acceleration is anticipated in early 1984 when the rate of increase should average out near 6.5%.

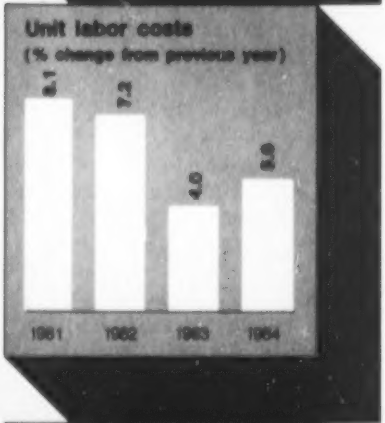
Moreover, recovery will also mean some improvement in productivity—to about a 2% increase in 1983 versus the "no change" 1982. As welcome as this is, however, it would still be under the 3%-plus longterm rate of increase noted over the past few decades.

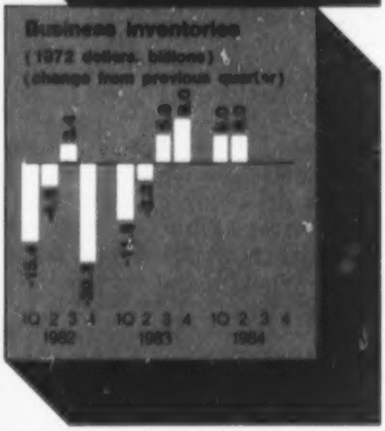
Nevertheless, 2% is not to be sneered at. It will reduce this year's unit labor cost increase (wage rates less the efficiency offset) to only around 4%—well under the 8% and 7% readings of 1981 and 1982.

But here, again, some modest acceleration in the first half of 1984 is likely (to perhaps 5%) as wage rates slowly accelerate and smaller GNP gains make it difficult to maintain the 2% productivity pattern anticipated for the current year. Upshot:









Unit labor costs may advance at near a 5% annual rate during the first six months of next year.

Inventories: The big paring wave of late 1982 and early 1983 seems about over. Stocks are just about in line with sales. However, most businesses will not be inclined to accumulate inventories beyond current requirements—primarily because of still-extremely-costly interest, insurance, warehousing, and spoilage costs. Moreover, although business is getting more confident about the economy, there is still considerable uncertainty regarding the strength and duration of the recovery.

As such, any nearterm accumulation will be quite modest—only about $5 billion at annual rate (in 1972 dollars) in the third quarter and $8 billion in fourth. Nevertheless, that's a major change from late last year when stocks in 1972 dollars were being drawn down at over a $20 billion annual rate.

As for early 1984, the accumulation is likely to continue, but at a relatively slow rate (something in the order of $5 billion annually).

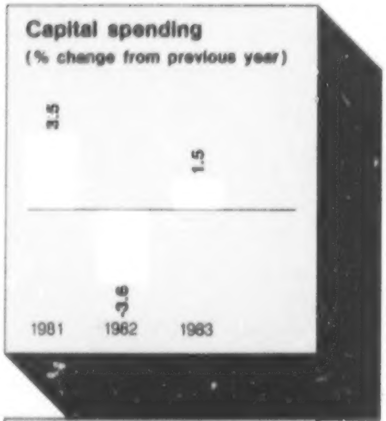
Capital spending: There are still no signs of a major pickup here. True, nondefense orders have been picking up a bit of late. But they still remain below shipments, thus suggesting some further retrenchment.

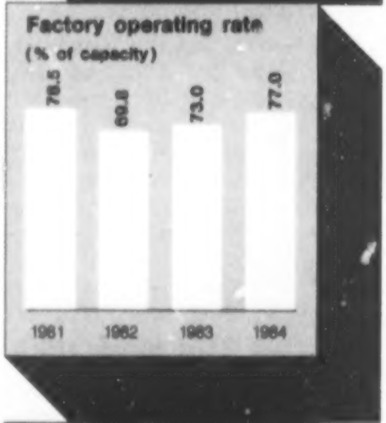
Actually, several factors account for the languishing performance: the severe 1981-1982 recession, high interest rates, and, most importantly, low rates of capacity utilization.

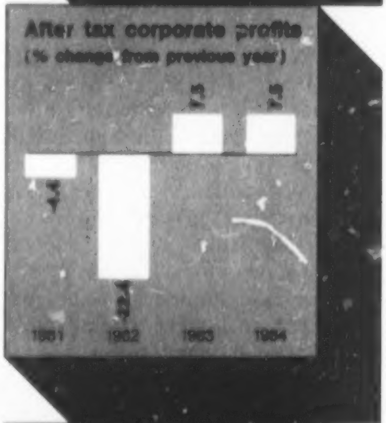
To be sure, the 1983 recovery will eventually result in some expansion in investment programs, but continued high real costs of borrowing and low operating rates will limit the 1983 real increase to only 1.5%, with most of the improvement occuring toward yearend.

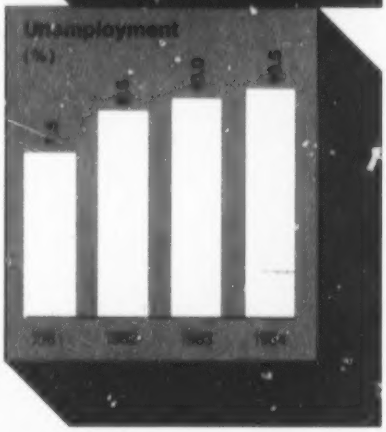
Production and capacity: A sharp 8-9% annual rate of increase in volatile industrial output may occur over the next few quarters. But because of the equally sharp slide in late 1982, the overall average gain for the year will only be in the order of 2½%. As for the first six months of 1984, the average annual rate of increase should be in the 4-6% range.

This, in turn, suggests some mod-









est upturn in factory operating rates. If you assume a modest 1-2% annual capacity addition, then operating rates, currently just over the 70% mark, could reach 75% by yearend. But they would still be under the 80% level normally recognized as the signal for any big, new, capital expansion boom.

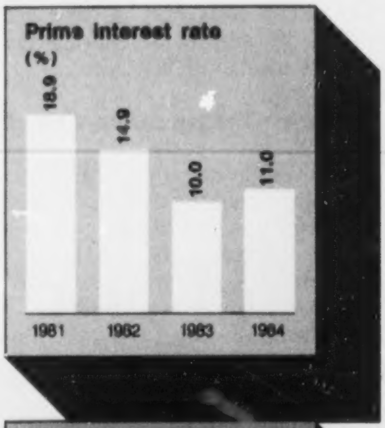
Corporate profits: Last year's more-than-22% decline in the after-tax take isn't quite as bad as it looks. Reason: Reduced inflation has reduced the illusory "inventory profit" share of the total to a negligible amount. More significant, the trend from here on in looks to be positive, with gains for both 1983 and early 1984 put in the 5-10% range.

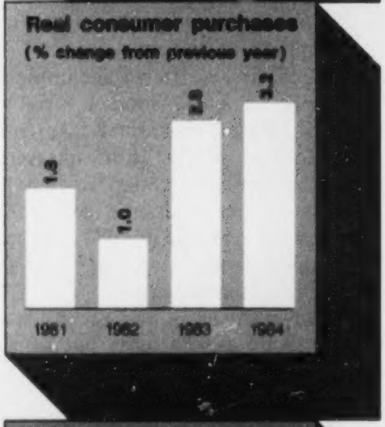
But a word of caution: Performance among industries and among companies within an industry may vary considerably. In any event, retailers, home builders, and communications firms should tend to fare best. On the other hand, as suggested previously, most capital goods industries seem to be facing another lackluster 12 months.

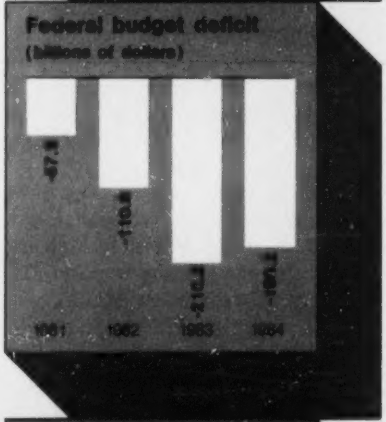
Unemployment: Don't expect any significant improvement through mid-1984. True, some laid-off workers will be called back. But many companies will hesitate to rehire until they're convinced the upturn has longterm staying power.

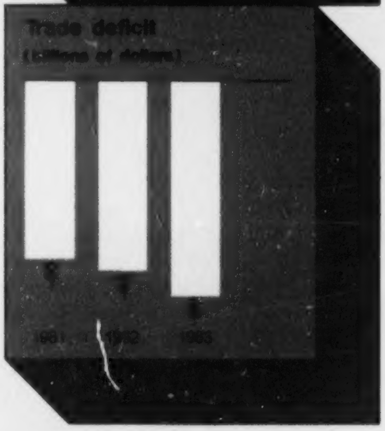
One other unknown in the jobless equation is just how many discouraged workers who have been dropped out of the workforce (and who are therefore not counted as being unemployed) will come back. Their number is significant (1.8 million). Assuming that some of these people do reenter the job market, it's going to make it even harder to bring the unemployment rate down. Best bet: a 10% jobless figure for 1983 as a whole, with perhaps even a rise to 10.5% during the first half of 1984.

Interest rates: The recent decline should continue for a few more months—but could well bottom out before yearend as (1) business demand for credit turns up and (2) the government steps up borrowing to finance its huge deficit. Indeed, the prime rate could well rebound into the 11-12% range by early 1984. This, in turn, could also put some upward pressure on mortgage rates which have up to now been in a slowly declining trend (to 13% at latest report).









Housing: This sector is now a star performer. In the first quarter 1983, new starts reached an annual rate of 1.7 million units—in response to somewhat lower mortgage rates and stable prices for houses. For 1983 as a whole, housing starts may also be expected to total 1.7 million units (versus just over 1 million last year).

But some slowdown may develop in 1984 to annual rates of 1.5-1.6 million units as unemployment continues high and mortgage rates rise somewhat.

Consumer buying: The new 10% tax cut could mean some nearterm stepup. But with unemployment high, any gains should be relatively moderate. It should also be kept in mind that the new tax cuts will benefit primarily the high income groups. Clearly the unemployed and low income groups pay no income taxes—or very little.

All in all, real consumer purchases in the second half of 1983 may be growing at an average annual rate of 3.5-4.5%—somewhat stronger than the 2½% first-half performance and enough to push the 1983 overall average up by as much as 3%.

One of the key sectors to watch here is volatile auto purchases. Even during the upbeat first quarter, 1983 car sales came to only about 8.4 million units at annual rate—reflecting the reticence on the part of consumers to shell out upwards of $10,000 for a new set of wheels—even though their old cars are beginning to break down. This restrained car buying pattern should continue, leading to only about an 8.5-million-unit year—a far cry from the 10 million or more vehicles sold in pre-recession years.

Such a cautious buying pattern also points to a high personal savings rate—with the ratio of saving to disposable income expected to fluctuate in the relatively high 6-6½% range for the rest of the year and into early 1984.

Federal budget: While some defense cuts look increasingly likely, they'll be partially offset by nondefense increases. As such, it's hard to see the fiscal 1983 red ink figure dropping much under $200 billion. Nor is there that much chance of major reductions in fiscal 1984 as lower inflation rates reduce Federal revenues.

The big worry, of course, is that this kind of deficit could put renewed upward pressure on (1) interest rates and (2) the overall price level. This latter (inflation) impact to a large extent will depend on how the deficit is financed. If the Federal Reserve monetizes a large part of the debt, the consequences could be quite inflationary. It is unlikely that the Fed would pursue such a policy.

International trade: Recent trade deficits can be traced back to several factors—including (1) the recession in many of the nations we traditionally export to, (2) the strong dollar which has raised our export prices and reduced the cost of our imports, and (3) the better quality and styling of some foreign goods.

In any event, our merchandise trade deficit (imports minus exports) rose to $43 billion last year. And it could well approach $50 billion in 1983 as (1) imports by consumers and producers continue to expand, (2) the dollar remains strong, and (3) the economic pickup in other countries lags our own.

What to watch: Close monitoring of both inventories and prices are "musts" in the uncertain days ahead. On the inventory score, for example, a proper balance must be achieved between tonnage in stock and production requirements. Too large an inventory will not only be costly but any inventory profit windfall will be harder to come by in today's basically noninflationary climate.

On the other hand, too low an inventory position could result in loss of sales, especially if (as may be the case) some vendor delivery times begin to stretch out.

As for prices—despite a firming overall trend—there will be ample opportunities for nailing down bargains as suppliers vie with each other to boost market share. In any event, it might take another 3-6 months before all the discounting in metals, plastics, and other key raw materials finally begins to dry up.

Survey of executives

Expect small increases for most prices

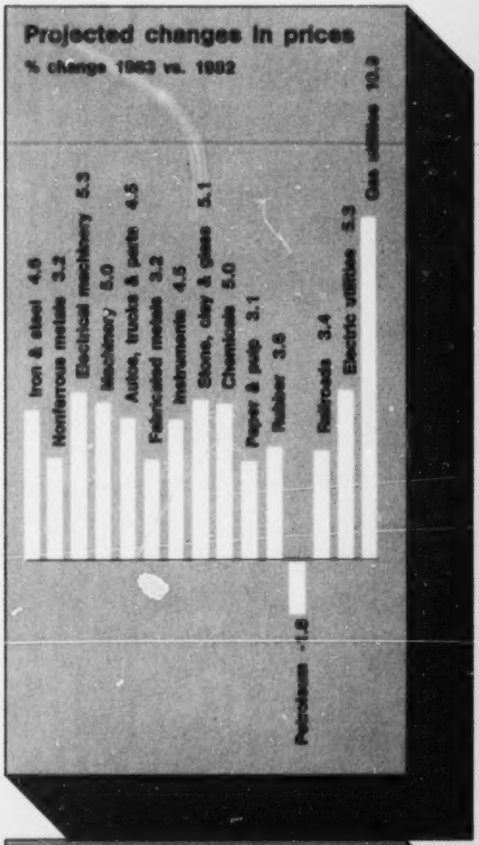
Top corporate executives are confirming what most purchasing managers already know: Prices aren't going to go up all that much this year. A new McGraw-Hill survey, for example, suggests that the average price increase in the manufacturing sphere will be a shade under 4% when compared to last year's averages. As recently as the beginning of the year, these same respondents were talking about a 5½% overall increase.

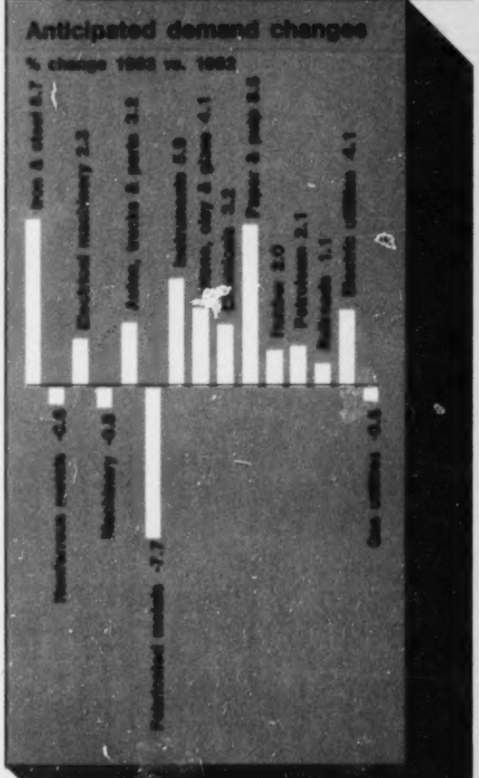
Equally reassuring (at least from the buyer's point of view) is the fact that these same corporate pacesetters see only moderate increases over the subsequent three years (1984-1986)—with the average annual advance over that period put at under 6%.

To be sure, there is considerable variation on an industry-by-industry basis. But as the accompanying chart suggests, not one single manufacturing industry is expected to reach even a 6% inflation level this year.

And the outlook is much the same when you include such nonmanufacturing sectors as mining, utilities, and services. Indeed, gas utilities (where a 10.9% increase is seen) is the only area in the entire economy that is looking for more than a 6% price increase this year.

One key factor behind the price restraint is probably the relatively small increase in demand anticipated by most of these industries. In the manufacturing sector, for example,





the average real gain in demand is put at only 3.5% in 1983—though a few industries such as steel, aerospace, and paper expect increases significantly in excess of this overall national average.

And once again this conservative scenario spills over into future years. In the 1983-1986 period, the average manufacturing advance in real demand is put at only a shade above 5% a year.

The new projections, part of a comprehensive plant and equipment survey, also reveal these other findings of interest to PMs:

- **Capital outlays:** Filter out the inflation factor, and total spending this year could be off more than 6%—even more than in 1982 when capital investment dropped 5½%. And while some fractional increases are anticipated for subsequent years, the gains will be far under those experienced in the 1960s and 1970s.

- **Capacity:** Lowered plant and equipment spending totals also mean fewer additions to overall industrial potential. Only about a 1% real gain is suggested for 1983—with only slightly higher 2% average annual increases projected over the 1984-1986 period.

- **Modernization:** There's more and more accent on upgrading efficiency. Respondents say they plan to earmark 67% of their plant and equipment dollars for improving facilities over the 1983-1986 period—some 10 full percentage points above the 57% reading of just last year.

- **Operating rates:** The small capacity additions combined with 5%-or-so annual increases in real demand suggest a slow upcreep in factory utilization rates from the low 67.5% level hit at the end of 1982—with perhaps the 80% level achievable by the end of 1984 or early 1985.

McGraw-Hill analysts, commenting on the study, say that the capital spending estimates may be a bit too gloomy in view of the improving business picture. Historical perspective would seem to back this feeling up. In virtually all post-World War II recovery periods, capital spending has tended to rise more than suggested by initial survey estimates.

Survey of *PW* readers

First-half trend to continue

Second half 1983 isn't likely to be all that different from the first six months. At least, that's the picture painted by the vast majority of purchasing managers responding to a ***PurchasingWorld*** "outlook" survey.

To be sure, not everyone completely agrees with the general consensus: slow but spotty growth and gradually firming prices. But by and large, few expect any major deviations from this scenario—and virtually no one sees any boom or bust in the quarters immediately ahead.

Most of the queried purchasing executives are also in general accord about the economy's overall health. As one Ohio-based buyer puts it, "If we can maintain the current moderate uptrend, I think the recovery can last not only through 1984 but even into 1985—and with only a modest amount of additional inflation."

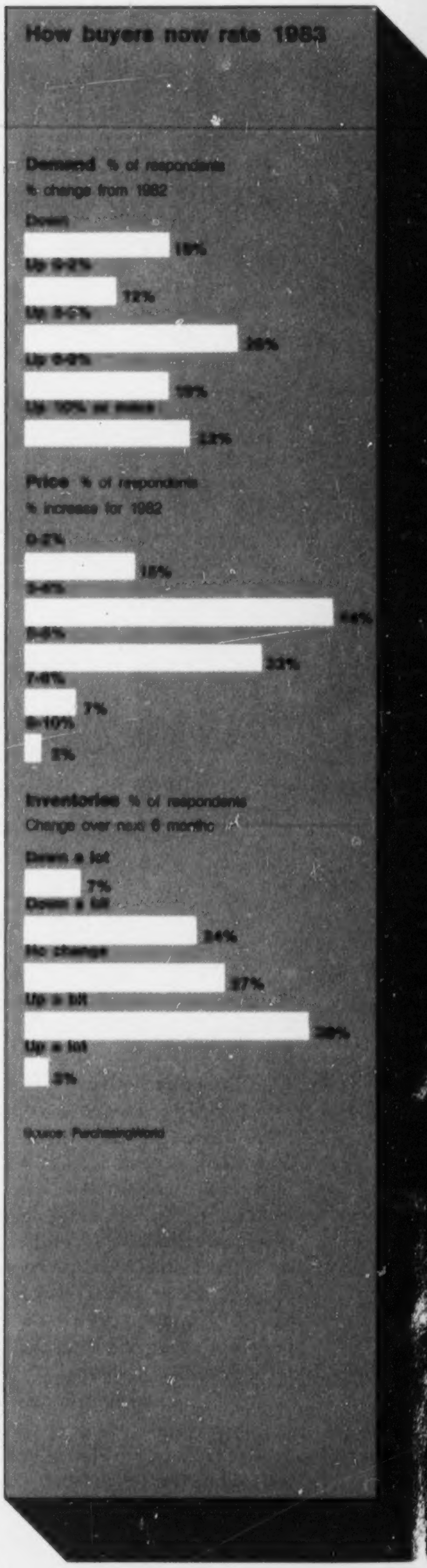
Here's a more detailed rundown on how he and his fellow PMs see the situation shaping up over the next 6-12 months.

- **Second-half 1983 growth:** An impressive 71% of survey respondents see their firms' July-December demand topping first-half levels. And for the year as a whole, an even larger 81% see 1983 ending up in the plus column. But more than two thirds of these respondents qualify their predictions—noting that future nearterm gains will be relatively small.

- **First-half 1984 growth:** An even larger 88% anticipate further improvement over the first six months of next year. But again, about two-thirds add that the increases will generally be on the restrained side.

- **Midcourse growth corrections:** Some 62% have made some changes from their beginning-of-year forecasts—with a slightly larger number opting for an upward adjustment rather than a downward one.

- **Inventory trends:** Plans over the



Source: PurchasingWorld

next six months suggest little significant upward movement—despite the somewhat higher production schedules currently anticipated. Survey returns tell the story: Some 42% contemplate stock increases—a figure that's pretty much offset by 31% who still seem intent on paring.

- **1983 price increases:** The days of declines are over—with every single respondent projecting some sort of advance. But more than three out of four say the increases will be in the relatively modest 3-6% range.

- **Second-half versus first-half prices:** Despite the moderation anticipated, many buyers are bracing for some nearterm acceleration. Specifically, some 42% look for somewhat bigger increases—versus 56% who anticipate no real change, and the only 2% who are still hopeful of more deceleration.

- **Midcourse price corrections:** The increases just noted were fully anticipated as long ago as the beginning of the year. Indeed, more PMs have lowered their overall 1983 price-hike estimates (27%) than have raised them (17%).

But whatever the amount of upward pressure, buyers seem determined to keep future hikes within bounds. Several, for example, talk of more longterm contracts and commitments.

Other price-hike-stymying approaches noted by responding buyers: (1) more consolidation of purchases to get better deals, (2) expansion of sources of supply, (3) increasing reliance on lower-priced imports, (4) the establishment of specific cost-cutting goals, and (5) asking that producers provide detailed cost justification for all major price increases.

Keeping inventories trim—as noted earlier—is also high on the list of buyer priorities. This, in turn, is leading to increased reliance on (1) vendor stocking plans, (2) more frequent ordering, (3) improved leadtime monitoring, and (4) price hedging only when a significant savings can be effected.

The outlook is summed up by one Pennsylvania-based purchasing executive: "We just can't afford to let our guard down."

NAPM business survey

At least 12 months of improvement

The prestigious 250-member NAPM Business Survey Committee is pretty much in accord with most ***PurchasingWorld*** readers.

In the words of Charles T. Haffey, chairman of the committee and Pfizer's vice president of corporate purchasing, "The group's latest survey readings pretty much confirm the feeling tht the economy will remain in uptrend for at least another 12 months with only slight or moderate inflation."

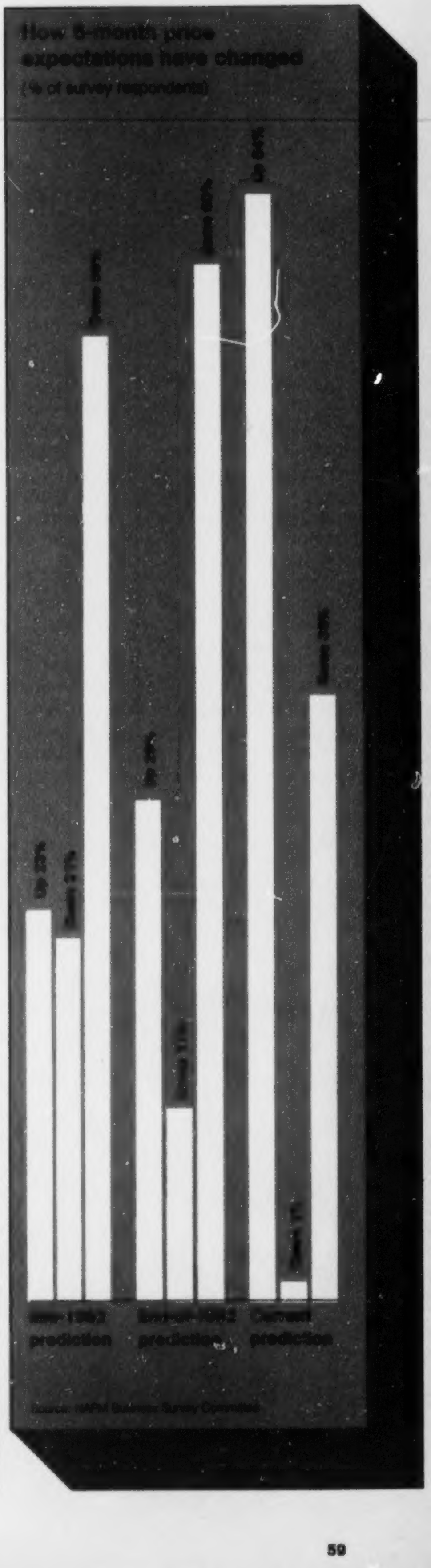
To be sure, the new price forecast isn't quite as rosy as it was six and 12 months ago when many members said they were anticipating stability or even some actual declines in procurement cost averages (see chart alongside). But by and large, the readings are encouraging.

Specifically, while nearly two-thirds of queried members now expect an increase in industrial tags over the next six months, the advances are expected to be slight (39%) or moderate (61%)—and only one in five expects them to be across the board.

One factor behind the expected moderation could be estimated relatively low factory utilization rates. At latest report, for example, some 40% of the respondents said their firms were operating at under 75% of their potential. That's not all that much of an improvement over the 51% response in late 1982 when the economy was scraping bottom.

And, adds Haffey, some 11% are still operating at under 50%—the second largest number in this category since the question was first asked of these purchasing executives some 23 years ago.

Not surprising, surveyed committee members also say they see no capital spending boom this year. Indeed, 40% report their firms will cut back on plant and equipment outlays—more than outweighing the 33% who see some gain over the current year.



Source: NAPM Business Survey Committee

Econometric models

Inflation estimates revised downward

The nation's big economic think-tanks have become a bit more confident about holding the line on inflation.

A comparison of four major forecasting models (see table) provides the details. Right now, the average 1983 advance (GNP price deflator basis) is put at 4.7%—nearly a full percentage point under the 5.6% average suggested when the same outfits were queried just six months ago (***PurchasingWorld***, 1/83, p. 58).

The outlook has also brightened for producer prices and the cost-of-living, for which the new 1983 average inflation forecasts (2.0% and 3.1%, respectively) are even farther under earlier estimates.

And the same improving pattern is projected for the following year (1984); again, earlier estimates have been pared by upwards of one percentage point.

That's not to say, of course, that some acceleration from currently very low 1983 inflation levels can be completely avoided. But the advances should be quite moderate. As a Wharton spokesman puts it, "Overall inflation is expected to remain in the 4-6% range through 1985."

Talks with the econometricians who monitor the hundreds of equations that go into these price forecasts suggest several reasons for the improved inflation outlook. These include (1) less-than-earlier-anticipated wage hikes, (2) the early 1982 decline in OPEC oil tags, and (3) operating rates which are now expected to remain well under preferred levels for at least another year and a half.

To be sure, prospects for nearterm (1983) growth haven't changed all that much (the current 2.8% average projection for real GNP is actually fractionally under the beginning-of-the-year 2.9% estimate). But again, there's a note of optimism. Next year looks somewhat better than previously anticipated, with the new 4.8% growth consensus running about 0.3 percentage points under the six-month-ago estimate.

DRI notes four factors as contributing to its relatively favorable nearterm real GNP forecast: (1) the end of the long 1982-1983 inventory correction, (2) the surprisingly fast pickup in housing starts, (3) a steady rise in both personal income and consumer confidence, (4) the additional purchasing power stemming from income tax refunds and the new July tax reduction.

This latter factor—when combined with personal income gains and reduced inflation— should result in a 3.4% annual rate of advance in real consumer spending over the 1983-1984 period according to DRI equations. Indeed, even sagging capital spending is expected to eventually turn around—with this year's projected 3.7% decline turning into a respectable 6.8% increase during 1984.

Another reassuring note: The metals are all pretty close to each other when it comes to projecting growth, prices, and other key business parameters. This year's GNP growth forecasts, for example, vary only from 2.6% to 3.0%—with the various GNP price estimates falling in the almost-as-miniscule 0.5% percentage point range.

The point to keep in mind here: The chances of all four econometric models making the same error—when all are computed independently—would seem to be mighty slim.

Some serious problems still exist, however. Prime interest rate forecasts, for instance, continue to point to near double-digit levels. And while the unemployment rate could drop a percentage point or so in 1984, the 9% or slightly higher rates anticipated at that time are still far too high for comfort.

Spokesmen for all four econometric models freely admit to concern about these last two business indicators. But here, too, there could be a rosy side. As one of the interviewed analysts put it, "If these factors hold growth down to lower rates than noted in previous upturns—then the recovery might last longer and be less inclined to set off a new inflationary spiral."

Comparing econometric forecasts

Real GNP (% change)	**1983**	**1984**
DRI	2.8	4.8
Chase	2.6	4.5
Wharton	3.0	5.3
Merrill Lynch	2.8	4.5
4-model average	**2.8**	**4.8**
Industrial production (% change)	**1983**	**1984**
DRI	4.1	7.3
Chase	2.1	7.0
Wharton	3.1	8.9
Merrill Lynch	3.0	7.9
4-model average	**3.1**	**7.8**
GNP price deflator (% change)	**1983**	**1984**
DRI	4.8	4.6
Chase	4.7	5.4
Wharton	4.5	4.9
Merrill Lynch	5.0	5.4
4-model average	**4.7**	**5.1**
Producer prices (% change)	**1983**	**1984**
DRI	1.7	5.6
Chase	2.0	6.4
Wharton	2.2	5.7
Merrill Lynch	2.1	5.1
4-model average	**2.0**	**5.7**
Consumer prices (% change)	**1983**	**1984**
DRI	3.3	4.8
Chase	3.0	4.8
Wharton	2.7	4.5
Merrill Lynch	3.3	5.4
4-model average	**3.1**	**4.9**
Prime interest rates (%)	**1983**	**1984**
DRI	10.7	11.2
Chase	10.2	9.4
Wharton	10.1	9.5
Merrill Lynch	10.3	10.9
4-model average	**10.3**	**10.3**
Unemployment rate (%)	**1983**	**1984**
DRI	9.9	9.0
Chase	10.2	9.4
Wharton	10.0	9.0
Merrill Lynch	10.1	9.2
4-model average	**10.1**	**9.2**

Data Resources, Inc.

Uneven hikes in industrial prices

Brace for modest rises in most industrial product lines over the next few years—with the rates of increase slowly accelerating.

That's the message from the latest DRI Cost Forecasting Service computer printout. What's more, the rate of gains is likely to be quite uneven—with some of the areas that were hard hit during the recent recession likely to slip back into the double-digit inflation range by 1985.

But spokesmen at the econometric consulting firm hasten to add that the overall price picture still doesn't look all that bad. Industrial producer price averages in 1984, for example, are only expected to run about 5.8% above this year's estimated level—with the increase over the subsequent year (1985) put in the only-slightly-higher 7.1% range.

DRI analysts cite several factors operating to keep prices from really taking off again. These include (1) relatively low factory operating rates (they'll average only 77.7% as late as 1985), (2) restrained overall GNP growth (4.8% in 1984 and only 3.8% in 1985), and (3) fairly moderate wage cost hikes, which are expected to average near 5.3% a year over the 12-quarter period ending in late 1985.

A more detailed rundown on how these factors will be impacting on individual product lines follows.

■ **Energy:** The stage is set for a gradual recovery in refined petroleum tags—and by 1985 they could be advancing at near a 9.6% rate. As for coal, annual rates of gain of 2.4%, 7.2%, and 8.1% are seen for 1983, 1984, and 1985, respectively—with comparable gains for electricity put at 5.5%, 8.9%, and 9.4%.

■ **Steel mill products:** Rising demand will permit gradually accelerating increases. Indeed, the compound annual rate (CAR) of increase over the 12-quarter 1983-1985 period is put at around 8.5%. But some individual product lines such as stainless plate and galvanized sheet will show somewhat smaller CARs (6.7% and 7.4%, respectively).

■ **Nonferrous metals:** The need to catch up from recent lows points to a CAR of 11.4% over the 1983-1985 forecast period. Individual metals over this period will fare as follows: aluminum ingot—up 3% a quarter from now through the end of 1985, copper—up 11.4% a year (which would bring quotes up to $1.06/lb by late 1985), lead—up about 6% a quarter over the next year, and zinc die casting alloys—up 0.7% in the third quarter and about 2.3% per quarter over the 1984 span.

■ **Metal components:** Increases will vary sharply. These annual rates of advance for 1984 and 1985, respectively, are examples: valves and fittings—6.8% and 9.4%, bearings—8.4% and 13.2%, and fasteners—4.8% and 8.6%.

■ **Chemicals and allied products:** Look for a 5.4% CAR in industrial chemicals over the 12-quarter 1983-1985 period. Prepared paint quotes will also accelerate—to 4.5% and 6.4% annual rates of rise in 1984 and 1985.

■ **Corrugated boxes:** Prices have bottomed out—and should rise at near a 4% annual rate over the rest of the current year. Modest subsequent escalation suggests advances of 4.2% for 1984 and 6% for 1985.

■ **Machinery:** Increases will remain on the moderate side—with these average annual hikes anticipated for 1984 and 1985, respectively: electric machinery—5.8% and 6.8%, electric motors—7.3% and 7.9%, metalworking machinery—7.3% and 9.3%.

■ **Electronic components:** Look for less than 1% average quarterly increases over the next 2½ years in such key areas as digital bipolar ICs, digital MOS ICs, and linear ICs.

The accompanying table provides additional details on these and other major industrial price sectors.

The price outlook into 1985
(Comparison of third quarter pricing)

Price increase (%)	1982/81	1983/82	1984/83	1985/84
Raw materials, energy				
Manufacturing supplies	4.2	3.0	6.8	8.5
Processed fuels & lubricants	-0.8	-5.0	5.9	10.3
Gasoline	-5.5	13.0	3.7	12.9
Industrial chemicals	-6.2	-2.0	[illegible]	7.7
Miscellaneous chemicals	4.3	1.1	4.9	9.0
Metals				
Stainless plate	5.7	-9.1	10.8	7.5
Foundry & forge products	3.8	3.5	8.0	10.1
Primary nonferrous	14.7	10.9	15.3	9.3
Copper & brass mill shapes	-8.3	16.8	12.2	7.3
Components				
Hardware	6.2	3.5	4.8	6.4
Valves & fittings	3.5	1.0	7.8	9.3
Corrugated cartons	-2.0	0.1	4.4	6.3
Electronic components	3.1	4.1	3.5	4.3
Construction materials				
Rebar	-7.5	-6.0	8.8	13.4
Structural metal	2.2	-1.2	8.6	13.5
Sand, gravel, stone	6.6	2.5	3.7	8.1
Bituminous paving material	-5.0	-0.9	7.7	[illegible]
Machinery				
Heating equipment	4.9	3.0	5.8	6.7
Electrical machinery	4.0	3.6	6.2	7.0
Pumps & compressors	5.6	1.5	9.3	13.1
Fans & blowers	2.8	2.8	6.2	7.2
Trucks	6.5	5.9	8.4	8.1
Air conditioning & refrig.	3.4	5.6	10.2	7.8
Consumer items				
Shelter	6.4	-0.7	3.1	7.7
Transportation	4.2	1.3	4.2	7.8

Note: Selected from more than 200 wage and price forecasts.
Source: Data Resources Inc., Cost Forecasting Service.

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Small shipments: Target for better buying

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PurchasingWorld

Vol. 27, No. 8 - August 1983

Helping you manage the business of buying

6 **Letters**

11 ***PW* Predicts**
Firmer, slightly higher prices coming

19 **Datatrak**
Key economic trends 19
Current prices 21
Steel scene 24
Procurement status 26
Leadtimes 28
Spot market prices 32

34 **Purchasing Law**
Understand quotations versus offers

36 **Negotiations**
Needed: Longrange commitment to excellence

38 **Value Analysis**
Set the stage for effective creativity

42 **Small shipments: Target for better buying**
Hot competition among carriers boosts purchasing's opportunities for greater value in time-sensitive transportation services.

48 **Getting the most from trade shows: Prepare to do business**
Trade shows and similar expositions can offer a variety of excellent opportunities for purchasing managers. To get your money's worth from attending a trade show, *plan, plan, plan.*

50 **Lining up better deals in international markets**
Buyers get cracking when the dollar slides up or down relative to foreign currencies—and their sights are set on longterm benefits.

54 **Projecting the general inflation rate**
Here's a simple approach to determining how much inflation relief you can expect over the next few years.

56 **Smart buying will help keep freight rates under control**
Recent *PW* survey findings indicate PM's are burning the midnight oil in an effort to keep freight costs within bounds.

59 ***PW TechFile:* Plated Steel fasteners**
Before buying plated or surface-treated fasteners, the purchasing manager should know the facts.

61 **Keep on top of safety data**
Where to find information on regulations, standards, and parts failures

74 **Products**

87 **Talent Pool**

88 ***PW* Perspective**
Gambling in Vegas

* Metalworking issues

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PW PREDICTS

Robert S. Reichard, executive editor

Firmer, slightly higher prices coming

Some modest price acceleration come September or October now seems virtually inevitable.

To be sure, increases will be small and spotty for the most part—and certainly nowhere near the double-digit rates of a few years back. Nevertheless, they do suggest a basic change from recent experience when PMs have often been able to write their own tickets.

The upward tug will be basically demand generated as rising industrial output and some upward inventory adjustments to meet expanding production needs, push operating rates above the current 73% level.

The arithmetic on the factory utilization score is pretty convincing, if you accept consensus forecasts of about a 4% increase in overall production during the last two quarters of the year. Superimpose this gain on only about a 1% increase in capacity over this six-month period, and the average factory operating rate should be in the mid-to-upper 70s range by late 1983.

As a result, vendors should have a bit more leeway in posting price hikes—if not for fourth quarter 1983, then certainly for the beginning of 1984. Equally significant, big discounts should be increasingly hard to find.

Much of the upward impetus will come from basic raw materials where some products (especially in the metals, plastics, and chemicals sectors) are still underpriced relative to cost. Component parts will also begin to edge up as the economy continues to improve.

Only capital equipment is likely to remain soft over the next few quarters. This price easiness is confirmed by new Commerce Department estimates that 1983 will see the first decline in plant and equipment average prices (albeit a fractional one) in several decades.

What does it all add up to? Industrial producer price averages, which showed virtually no overall movement over the first six months of the year, should advance about 2½% over the second half.

On a somewhat more rosy note for buying executives, the acceleration should flatten during 1984 due to relatively restrained wages. Most projections, for example, point to only about a 4% increase in unit labor costs this year and just a slightly higher boost over the subsequent 12-month period. Since labor accounts for close to two-thirds of the average sales dollar, chances of a new cost-price spiral developing now seem minimal.

Thus, it's hard to make a convincing case for more than, say, a 5-6% increase in industrial producer price averages come 1984—even if you factor in some further increases in overall demand pressures

Aluminum

The year is turning out to be fairly bullish—with shipments expected to jump as much as 12% above 1982 levels. And it's showing up in prices. For one, ingot has rebounded into the mid-70s range. And many product quotes continue to inch up. Some

Electronic parts

The semiconductor industry is coming out of the recession with a bang. Signs of the times: sharp increases in new orders, the drying up of discounts, and extending leadtimes (waits as long as 20 weeks in some areas are not uncommon, and some chips are on allocation).

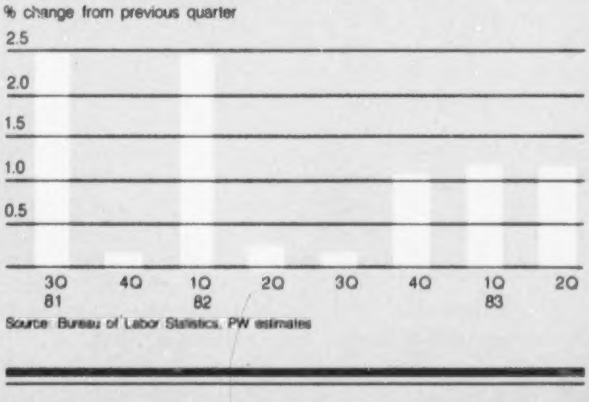
Citing these factors, a Motorola spokesman estimates that overall consumption will be up 15-18% this year and 23-25% in 1984. Recent order figures seem to confirm these numbers—bookings for the latest available month outpace shipments by almost 50%.

Equally significant, the order upturn is broad-based. Demands from the computer, telecommunications, commodity chip, and instrument markets are all up sharply.

Not surprisingly, prices are beginning to bottom out. The popular 64K dynamic RAMs have jumped into the $5/unit range—a considerable hike from the under-$4 asking price of a few months ago. Bipolar digital logic devices have also moved up 10-20%. And boosts are seen for silicon wafers and connectors.

In any event, the firming is beginning to show up in Uncle Sam's all-inclusive electronic components price index, where averages, after showing virtually no change through much of last year, are now moving up about 1% a quarter.

Electronic component price changes



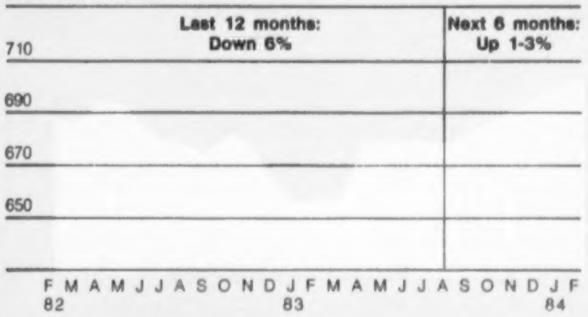
Source: Bureau of Labor Statistics, PW estimates

PW PREDICTS

Energy

Fuel and related products

Index: 1967=100



CURRENT SITUATION: Prices have edged up a bit over the past few months—with much of the impetus coming from higher gasoline quotes. There have also been some small advances in average electricity and natural gas tags. Petroleum products other than gasoline have been relatively stable. Ditto, coal. **Average these trends and the overall fuel and power price level is running 6% under yearago levels.**

DEMAND: The combination of a relatively slow business recovery and conservation is taking its toll. Last year the energy/GNP ratio fell 2.7%. And another ½%-or-so decline is projected for the current year. In any event, **total U.S. energy consumption this year is expected to rise by only about 1½%.** Though coal and electricity use will be up, neither petroleum nor natural gas use is likely to equal last year's level.

SUPPLY: Clear sailing almost everywhere. One reason: There's way too much natural gas around. In 1982 consumption dropped some 11% from two years earlier. And with little gain expected this year, producers and pipelines will be hard put to move nearterm supplies. As for oil, the global glut is likely to spill over into 1984. No sweat in refined petroleum products either; capacity is projected to be ample through 1990. The same for coal. **One exception: Propane could be a bit tight.**

PRICE OUTLOOK: Overall increases will be pretty much in line with average inflation trends through mid-1984. But look for considerable variation by type. Wharton Econometrics, for example, projects these increases for the 12-month period ending second-quarter 1984: coal (5%), natural gas (2%), electric power (4%), crude oil (1%), gasoline (3%), and residual fuel (4%). **But beyond mid-1984, prices could accelerate a bit.**

recent examples: (1) a 9% boost in can stock, (2) a 4¢/lb increase in residential siding sheet, and (3) reduced distributor discounts on common alloy sheet.

Still other signs of strength: declining North American producer stocks (off 30% from a year ago), stretching leadtimes, and a mill operating rate which has risen to near 70%. Upshot: An ingot increase into the upper 70s range is possible by yearend.

Copper

Markets continue to back and fill in the 75-80¢/lb range as conflicting forces keep prices in neutral. On the bullish side are projections for a 6-7% increase in U.S. consumption. But this is being effectively offset by still-rising global stocks (expected to rise to over 1.9 million tons by yearend) as Third World countries produce at near-capacity levels. Result: Earlier predictions for a 90¢/lb yearend quote look unrealistic—with little more than a 5¢/lb boost seen over the next few months.

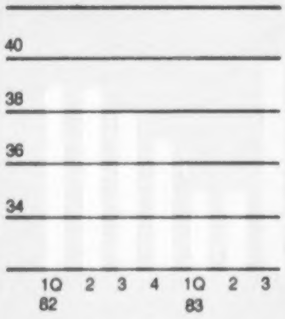
Polyproplylene

Support for the midyear 3¢/lb price boost is growing—with general purpose resin now selling for about 40¢/lb—although still considerably under the 45¢/lb-and-above list quote.

Behind the firming: improving demand from the fiber and auto industries—gains which have pushed operating rates above the 85% mark. Not surprising, there's talk of yet another small increase in market quotes before the end of the year, which will bring prices still closer to list levels.

Polypropylene

(Market price ¢/lb)



Engineering resins

The price advantage over competing metals is still quite substantial—7¢/cubic inch for the average engineering resin versus about 13¢/cubic inch for the average metal. More important, the differential (suggested in a new study by Chemical Business Development Co.) is likely to persist. CBD, for example, projects only "20% to 35%" resin increases over the next five years—figures that are not really all that large when compared to what metals may need to stay profitable over this extended period.

Computers

The price erosion in the

small-computer sector of the market continues. There are rumors, for example, that the Apple II could soon go for under $1000. And an industry shakeout seems inevitable—with perhaps 10% of the several hundred firms in the business eventually folding up.

On the other hand, chances of prices falling out of bed (as they have in the low-end home computer sector) seem minimal, primarily because the more sophisticated personal computers are sold mostly through specialty computer stores rather than through mass-merchandise discounters.

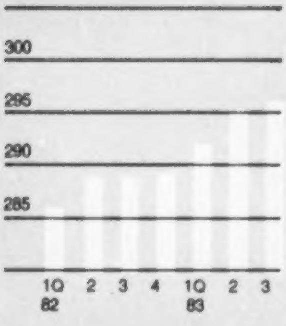
Zinc

Prices are finally beginning to firm—with new lists put near 43¢/lb. But that should be it—at least as far as further nearterm hikes are concerned—as the threat of North American strikes fade. True, U.S. slab metal consumption will be up about 100,000 tons this year. But this new level is still well under the 1.1 million tons chewed up annually during the 1976-1979 period. And global capacity and producer inventories are still more than ample, with still more scheduled to come onstream.

Paper

Prices are basically mixed. Lightweight coated groundwoods remain on the soft side—with some $40/ton recently knocked off the previous $760/ton level. Behind the easiness: new capacity, which has added some 18% onto industry potential since 1980. On the other hand, uncoated white paper is firm—with a recent 6% price hike reported to be holding up well. Linerboard, too, is holding relatively stable at the $270/ton level.

Paper and allied products
(Index: 1967=100)



Magnetic storage devices

Look for substantial price declines over the next few years. A new Predicasts study, for instance, puts nearterm annual growth at 39% on a unit-volume basis and 16% on a dollar basis. The implication here: The big Cleveland-based consulting firm is betting on a better-than-20% average annual price decline through the mid-1980s.

Construction machinery

Discounts are readily

Steel

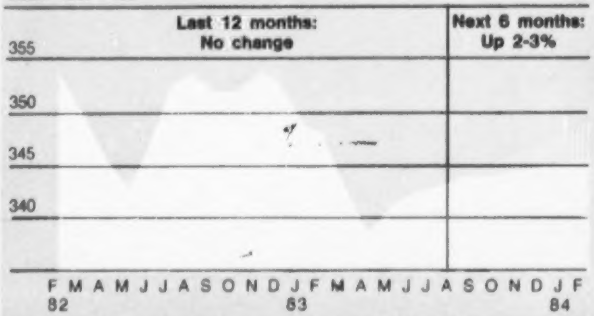
CURRENT SITUATION: **Discounting remains the order of the day.** Buyers of plate and heavy structurals, for example, report reductions ranging upwards of $150/ton. **Demand, meantime, continues to disappoint**—with the industry shipping only about 17 million tons in the second quarter, considerably under the 18-19 million ton expectations.

DEMAND: **Nearterm gains will continue to be limited by weakness in the capital goods and nonresidential construction sectors.** On the other hand, auto demand still looks positive. Ditto, the prospect of some user inventory accumulation. Best bet for the current and fourth quarters: shipment totals of near 18-19 million and 19-20 million tons, respectively. But that still means **a 1983 shipment of only near 70 million tons.**

SUPPLY: **Ample is the word**—a situation which is likely to continue, judging from new availability evaluations from both service centers and buyer surveys. **And mill operating rates are still struggling to break through the 60% utilization level.** Then, too, there's the considerable inflow of foreign metal. Current projections call for a 1983 import figure of over 15 million tons—18% of the overall U.S. market.

PRICE OUTLOOK: **Nearterm increases will be relatively modest**—reflecting both low operating rates and a strong dollar, which is keeping import tags 10-20% under comparable U.S. levels. **Some spotty advances are likely, but they'll be small and generally in the form of continued discounting off higher lists.** Hikes could accelerate next year as industry shipments edge toward the 80-million-ton mark and the industry strives to get back into the black. As a result, **1983 price averages could be up by as much as 8-10%.**

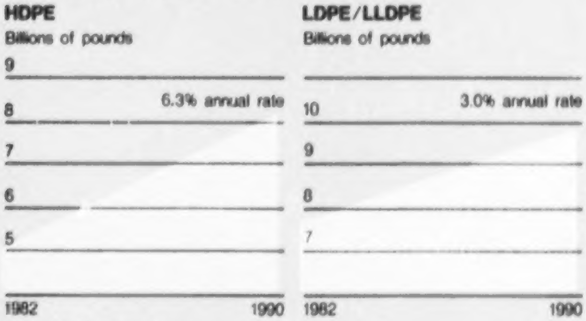
Steel mill products (List price)
Index: 1967=100



available as suppliers step up their drive to reduce top-heavy inventories. A strong U.S. dollar has also allowed the Japanese to undercut U.S. tags. Sign of the times: Quotes on mixers, pavers, and spreaders are off some 4% since the beginning of the year. Moreover, these official readings, which often fail to capture discounting, and other unofficial forms of price shading, show little change in such key areas as small dozers, front-end loaders, motor graders, and mid-sized crawler tractors.

Polyethylene

Polyethylene growth trends



Source: U.S.I. Chemicals

Polyethylene markets continue to firm. New 4¢/lb price hikes for both high and low-density resins are scheduled to go into effect this summer, on top of some fairly substantial first half increases.

Behind the rising price trend: a combination of factors, including higher feedstock costs, gradually improving demand, and an uptick in operating rates. And while no further substantial advances are anticipated over the next few months (it will take time for the market to adjust to increases, which in some cases range as high as 20% above late-1982 levels), the longer-term demand prognosis does seem to suggest further creepup.

U.S.I. Chemicals, for example, sees a hefty 6.3% annual rate of growth for HDPE, bringing totals up to 8.1 billion lb in 1990. The gain in LDPE/LLPDE, while smaller, will still be in the respectable 3% range—enough to add more than two billion pounds onto demand totals over the 1982-1990 period.

But the firm hastens to add that availability won't be any problem, estimating that the current, comfortable 82% rate (for all types of polyethylene) will reach only 89% by the end of the decade.

Petrochemicals

Prices continue to edge up as demand improves and previous gluts slowly disappear. Some typical early third-quarter prices: Butadiene, 34-35¢/lb (up ½-1½¢/lb); chemical grade propylene, 18½-20¢/lb (up about 1¢/lb); ethylene, as low as 21¢/lb (up 2-3¢/lb); methanol, up 4¢/gallon; benzene, contract prices steady at $1.50-1.55/gallon; styrene, approaching 31-34½¢/lb list levels.

Lead

The heavy metal continues to drift aimlessly in the low 2¢/lb range—some 3-5¢/lb under estimated smelter costs. To be sure, demand should show some improvement by fall as battery-maker demand improves. But with producer inventories still way too high, the upward pressure on prices is likely to be minimal.

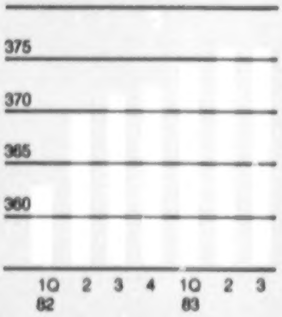
Quotes will be lucky to move up into the low 20s by fall. Nor is 1984 likely to show any major price spurt—when prices are expected to average out in the mid-20s range.

Machine tools

Still plenty of competition here as capital investment continues to lag. The basic problem is overcapacity. Industry activity is hovering in the $1.5 billion annual range—less than 30% of its normal $5 billion capacity level.

Japanese competition adds to the downward pressure—with Nipponese machines being discounted substantially. Another problem is: the low financing terms (sometimes 8% or lower) which are being offered by our Far Eastern competitors as they strive to reduce a several-thousand-machine U.S.-held inventory.

Metal-cutting machine tools
(Index: 1967 = 100)



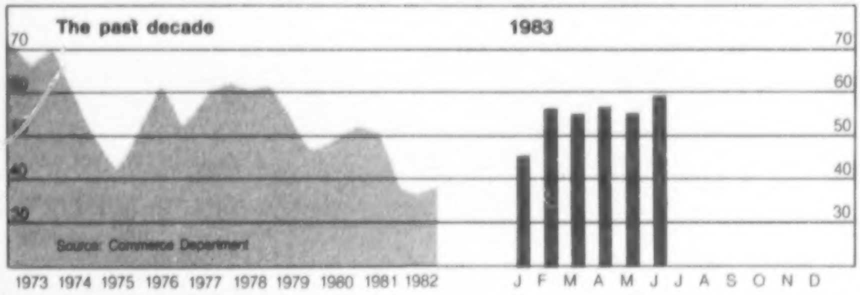
Fertilizers

Government acreage reductions and low sulphur tags are putting downward pressure on prices. Gulf Coast ammonia, for example, has dropped to under $125/ton—off some $20/ton from early spring levels. Potash is also on the shaky side, with standard grade material listed at only $50/ton—a quote that's off sharply from already low levels. *PW*

BUSINESS DATATRAK

NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)

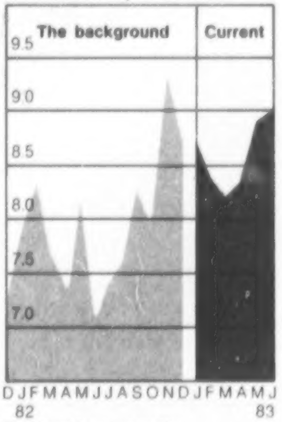


Source: Commerce Department

Leading indicators

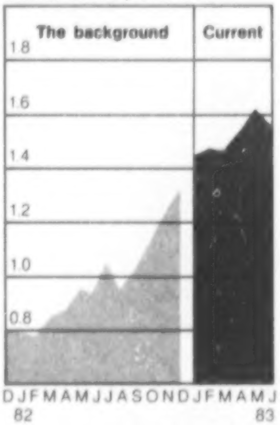
1. Car sales

Millions, seas. adj. annual rate



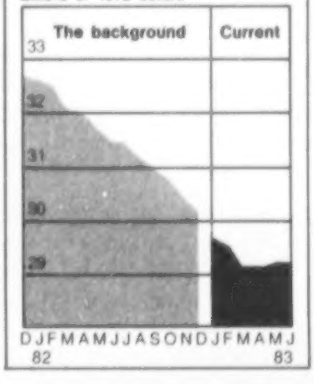
2. Housing permits

Millions, seas. adj. annual rate



3. Durable material inventories

Billions of 1972 dollars



KEY ECONOMIC TRENDS

Recovery gaining steam

The recovery is still gathering momentum.

Indeed, earlier growth estimates continue to be revised upwards with third quarter GNP now expected to advance by as much as 6% at annual rate. The evidence supporting such bullish forecasts is hard to refute:

- The NAPM Business Barometer (chart above) is now being clocked at close to 60—well above the neutral 50 mark and the highest level since pre-recession 1978-79.
- Uncle Sam's index of leading indicators has risen for the seventh consecutive month, enough to push totals some 13% above year-earlier levels.
- Private surveys remain extremely buoyant—with continued gains suggested by both the Conference Board's business confidence index, which reached a 7-year high, and Dun & Bradstreet's third-quarter outlook survey which looks for still more gains ahead.

A closer monitoring of some of the individual sectors of the economy also suggests further nearterm advances. Auto sales, for example, have risen to near the 9-million-unit annual rate—one of the highest levels in years (see top chart alongside).

Another consumer area, housing, is doing even better. Housing permits have jumped to near a 1.6-million annual rate—enough to sustain housing starts at current levels through summer and into early fall (center chart).

Still further confirmation about expanding consumer sales is provided by the Conference Board's buying plans index. This crucial yardstick of purchases over the next six months jumped 18 points at latest report—with sharp gains noted for autos, housing, and major appliances.

Another favorable sign is the relatively low level of business inventories. Stocks on the crucial purchased materials durable goods level are currently running 7% under a year ago in real terms.

What makes this so positive is the fact that both production and sales are running well above yearago levels. Upshot: Day's supply has fallen even more precipitously in many areas, suggesting that future GNP gains will come not only from gains in final consumption but also from some needed replenishment of depleted inventory pipelines.

But not everything is coming up roses. For one, interest rates are not likely to continue edging lower. A recent Wall Street Journal poll, for instance, sees both short-term rates and bond yields ending the year within one percentage point of where they are today. Other things being equal, this should put a damper on any further major acceleration in GNP growth.

Then there's the still

weak capital goods sector. Plant and equipment outlays now actually lag a year ago—and it may not be until early 1984 that this key indicator begins to turn up again.

International labor costs drop

Blame much of today's tidal wave of cheap imports on lower overseas unit labor costs.

Lest there be any doubt on this score, take a look at the accompanying chart. While U.S. unit labor costs rose by 10% last year, the comparable outlays for all of our major industrial trading partners (except for Canada) were actually heading down.

In the case of Japan, for example, the near-10% decline, when compared to our near-10% rise, made for about a 20% gap—a not insignificant development when one considers that labor is the most important cost input in most products.

The figures, part of a new Bureau of Labor Statistics (BLS) study, also point up the reason for the widening gap. Some of the difference was due to better overseas productivity performance. While U.S. efficiency was declining 1% last year, both Europe and Japan managed to rack up modest gains.

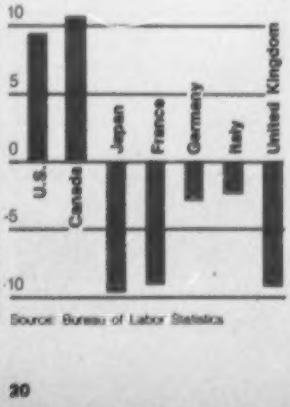
But this is only part of the story. By far the biggest factor was the strong U.S. dollar which reduced foreign costs considerably when calibrated in terms of U.S. currency. Indeed, every single overseas exchange rate dropped last year relative to the dollar—with double-digit declines noted for Japan, France, Italy, and the U.K.

The implication is clear: As long as the dollar stays high (and it has actually appreciated a bit more this year relative to other currencies), overseas vendors will be able to undersell us.

What's happened to labor rates

(1982 vs 1981 in U.S. dollars)

Percent change



Source: Bureau of Labor Statistics

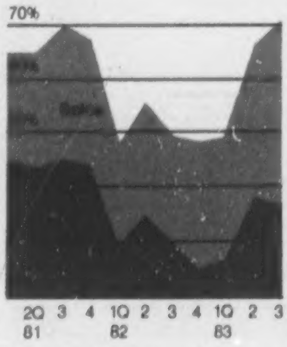
Business expectations sharply higher

Optimism is still the order of the day among the nation's top vendors.

A look at the accompanying chart tells the story; some 71% of the manufacturers queried in Dun & Bradstreet's new Survey of Business Expectations look for an increase in sales over the July-September period. That's a sharp jump from the less-than-50% figure of just six months earlier.

Vendor outlook is best since 1981

Manufacturers anticipating gains



Source: Dun & Bradstreet

Other plus signs revealed by the recent study:

- A probable continuation into the fourth quarter—based on expectations that third-quarter orders will be up significantly (72% see higher bookings versus only 9% who anticipate declines).
- Some inventory accumulation to meet expanding sales. The pertinent figure here: Some 37% look for higher stock levels—twice as many as those who still plan on paring.
- An uptick in profitability: The 67% who are counting on gains far outweigh the small 9% who are bracing for some decline.

Most of the earnings increases will be due to higher volume. But the rosier projections here could also reflect expectations of higher prices. On this score—some 45% of manufacturing respondents see higher selling prices over the current 3-month period—some nine times as many as feel quotes could edge a bit lower.

The relatively bullish outlook is probably best summed up by D&B's "Sales Optimism Index" which includes retail and wholesale as well as manufacturing activity. This yardstick (reflecting the difference between those projecting higher and lower sales) has jumped to 68—far above first and second-quarter readings and the highest level since 1979.

CURRENT PRICES

Modest price gains spreading

First-half industrial price stability is slowly giving way to some modest upcreep.

Uncle Sam's widely monitored industrial producer price yardstick, for example, is now showing some fractional rise after more than six months of relatively unchanged quotes. Blame the change on improving demand—plus the need by many vendors to recoup cost increases, which in some cases have been absorbed for more than a year.

The advances are most noticeable on the basic raw material level. Many petrochemicals, for instance, are spurting somewhat higher than third-quarter tags. So is chlorine. And the same is true for plastics where virtually every single commodity resin has moved up a few cents per pound.

Paper products, too, have shown some modest signs of firming. Ditto, many component parts and energy (including gasoline and heavy fuel oil). But the gasoline advance is in large part due to seasonal factors—so some leveling off here may be in the cards over the next few months.

Several aluminum products have also moved up. And the same is true of steel—though advances here have mostly been in the form of slowly narrowing discounts.

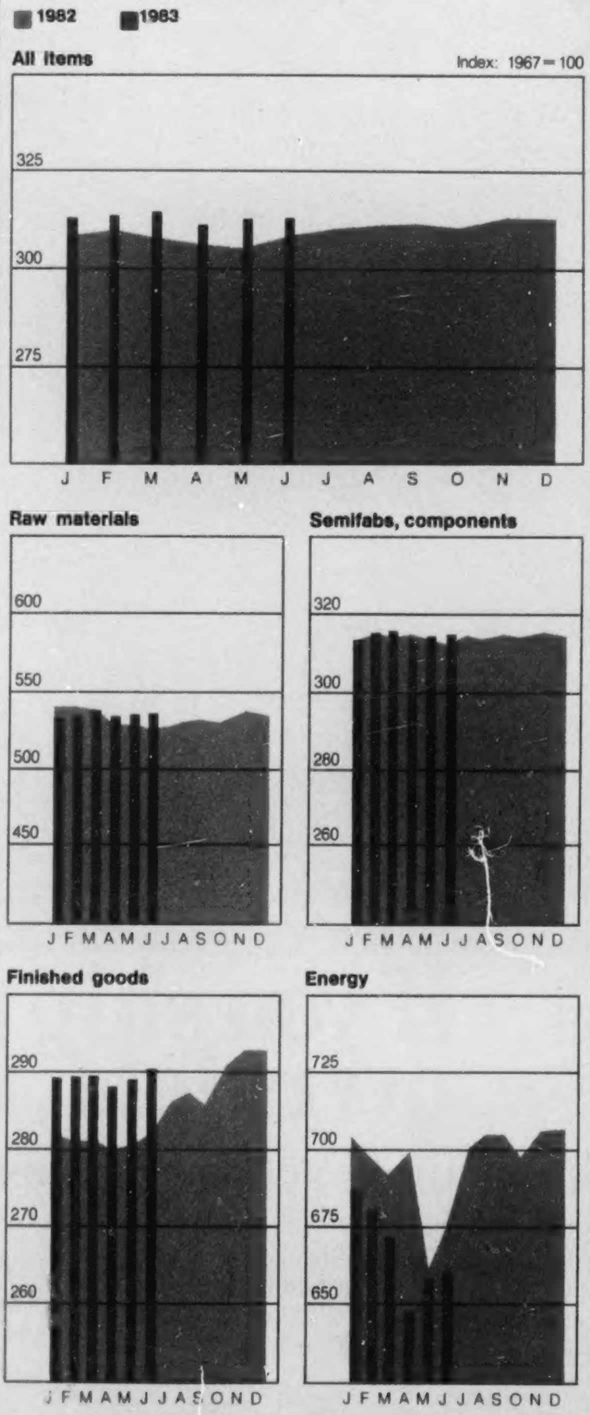
But on a more optimistic note, most capital equipment lines continue to mark time. In fact, discounting in some key equipment areas, such as machine tools, is still pretty much the order of the day.

In any event, government price watchers remain hopeful as far as holding the inflation line on overall averages is concerned—citing more-than-ample capacity and continued import competition. One official, for example,

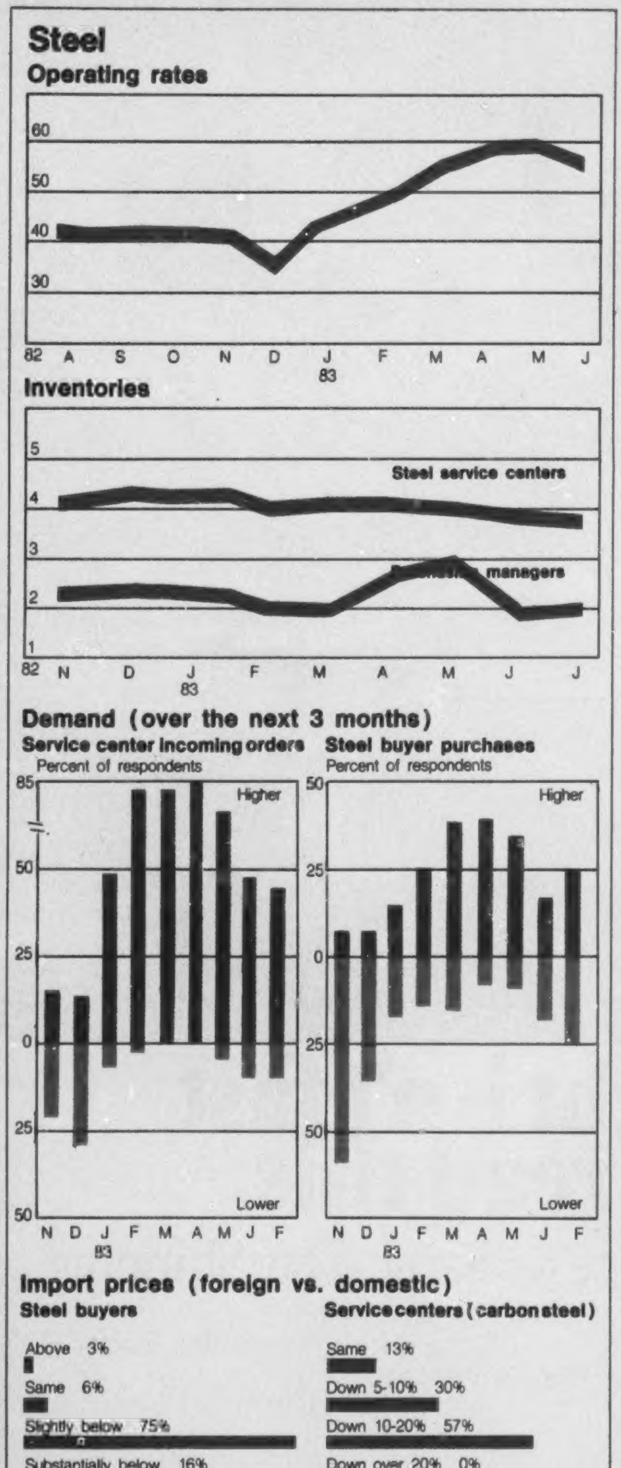
This month's breakdown

	Latest level (May)	% change from: Month ago	Year ago
Bearings	331.2	0.0	0.8
Bolts, nuts, etc.	265.9	-1.1	-1.8
Chemicals, inorganic	300.6	0.1	-4.9
Chemicals, organic	358.2	0.0	-4.8
Concrete products	301.0	0.2	0.9
Corrugated cartons	240.0	0.2	-2.8
Cutting tools, small	280.2	0.4	1.1
Electrical instruments	270.1	0.7	7.6
Electric lamps (bulbs)	307.4	-0.9	6.7
Electronic components	180.1	-0.1	2.6
Fans and blowers	336.9	0.2	0.5
Foundry and forge products	352.3	0.1	1.7
Fuel oil (residual)	1052.5	-3.1	-11.7
Furniture, commercial	286.6	0.0	4.1
Gasoline	587.4	4.1	-3.6
Glass, flat	229.7	0.0	1.5
Glass containers	351.8	-0.6	-1.8
Gypsum products	275.3	1.4	6.1
Hand tools	344.8	-0.1	2.3
Hand tools, power driven	221.0	0.0	-0.5
Industrial furnaces	360.1	-0.3	2.2
Integrating and measuring instruments	223.1	1.2	5.5
Internal combustion engines	342.7	0.7	5.0
Lubricating oil	774.4	-1.8	-12.8
Lumber millwork	298.8	-1.3	8.1
Material handling equipment	284.8	0.0	-1.0
Metal containers	337.4	1.6	2.2
Metal mill shapes (nonferrous)	310.5	1.5	3.8
Metal tanks	307.0	0.2	-1.7.
Motors and generators	324.2	0.8	5.9
Motor trucks (10,000 lb and under)	317.6	0.0	5.5
Office and store equipment	154.5	-0.2	2.3
Paperboard	248.9	0.2	-3.8
Paper boxes and shipping containers	247.1	0.2	-1.5
Paper office supplies	226.8	0.0	1.6
Paint	265.1	0.0	0.2
Plastic resins	285.4	0.2	0.8
Precision measuring tools	245.4	0.2	2.8
Pumps and compressors	347.8	-0.1	-0.4
Refractories	338.7	0.0	-0.2
Rubber belts and belting	330.8	0.3	1.4
Scales and balances	227.7	0.6	1.2
Steel products	347.3	0.0	-1.0
Switchgear	268.6	0.0	1.7
Textiles, synthetic fibers	157.2	1.2	-3.8
Textiles, gray fabrics	146.0	-0.1	0.1
Tires and tubes	246.5	0.0	-3.3
Transformers and power regulators	223.4	-0.9	0.3
Welding equipment	273.7	-0.1	0.4
Wire and cable	206.2	0.2	-0.6

Industrial prices at a glance



Source: Bureau of Labor Statistics



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

puts the average third and fourth-quarter gains in the modest 5-6% annual range—a fairly respectable figure given the extent of the current business recovery.

STEEL SCENE

Mixed outlook for steels

Good but not great. That seems to be the demand outlook for steel over the next few months—based on new surveys by the NAPM Steel Buyers Group and the Steel Service Center Institute (SSCI).

Metal-using PMs, for example, are pretty much split down the middle—with the 25% anticipating increased steel purchases balanced out by an equally large percentage who feel receipts could edge lower. (The remaining 50% see no change.)

True, distributors are a bit more optimistic (44% looking for increases on steel sales versus only 10% anticipating declines). But even here some of the earlier optimism has faded a bit. The current 44% seeing gains is far under the 80% and higher levels which prevailed as recently as early spring.

As SSCI president Andrew Sharkey puts it, "Most analysts have been predicting a modest, uneven recovery for 1983—and recent results seem to bear them out."

Nevertheless, the steel spokesman remains basically optimistic—predicting about a 10% overall gain in service center sales for 1983 as a whole.

One of the favorable signs he cites is the passage of the new surface transportation act. He figures this will mean a lot of bridge repair work later this year—something that will eventually benefit service centers handling heavy carbon products such as plates and structurals.

Stainless

Distributors also report a pickup in demand for stainless sheet and strip—led by increased orders from the transportation, automotive, appliance, computer, and kitchen equipment markets.

On a more negative note, however, Sharkey points out that two big markets—energy related equipment and heavy machinery—remain weak. He also notes that, in general, transaction prices have not followed the modest improvement in shipping levels.

On the other hand, the longterm prognosis for service centers remains quite bullish—a conclusion which was recently confirmed by an Inland Steel spokesman who predicts the role of distributors will continue to grow: "I wouldn't be surprised to see the day when the service center industry takes 35% of the market."

Inventories

Coming back to the nearterm, both buyer and distributor surveys also suggest a continued tight rein on inventories. Indeed, despite relatively low current levels (see chart), both groups would like to see their holding drop a bit further.

On the buyer front, for example, some 34% of the respondents feel their stocks are too high (versus only 3% who rate them as too low). Not surprisingly, some 38% say they'll be reducing tonnage over the next six months (versus only 3% who contemplate further additions).

The inventory evaluation is much the same for distributors. The pertinent figures here: current rating (23% too high versus 5% too low); trend over the coming months (23% decrease versus 10% increase).

Imports

Almost everybody agrees that imports are still a bargain. In the case of PMs, an overwhelming 91% say foreign metal is cheaper than the comparable domestic product—with 16% dubbing the price advantage as "substantial."

It's a conclusion confirmed by service centers, where more than half of the respondents put the price gap in carbon steel in the 10-20% range.

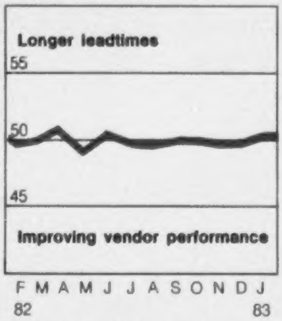
Even bigger bargains, they say, are available in stainless. Specifically two out of three put the advantage here in the 10-20% range—with another 8% estimating the saving to be in excess of 20%.

On the other hand, there's a feeling that some of these stainless discounts will narrow. Reason: Recent Washington imposition of higher tariffs on stainless sheet, strip, and plate—and lower quotes on stainless bar and rod.

Monthly procurement status report

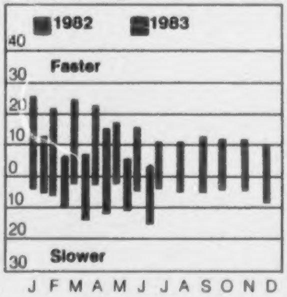
Leadtime index

A 'diffusion' index based on 158 key commodities. Above '50' indicates a tendency for leadtimes to stretch out. Below '50' suggests improving vendor performance.

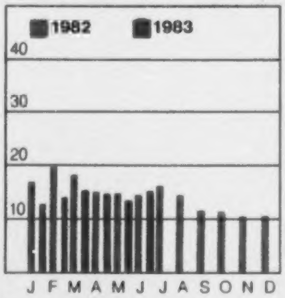


Delivery performance

Percent reporting deliveries

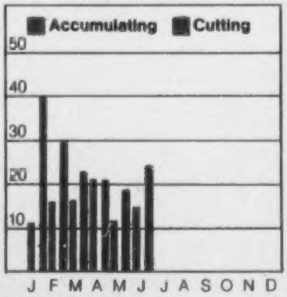


Forward commitments



Inventory strategy

Percent of respondents



Source: NAPM

PROCUREMENT STATUS

Leadtimes edge up—but "no sweat"

Things are finally beginning to show some signs of tightening up a bit.

That's not to say that most items are still not in ample supply or that deliveries are stretching out all that much. But the "51" reading noted for ***PW***'s exclusive leadtime index (it has inched above the neutral 50 mark for two straight months) suggests that a change is in mind.

A similar trend is being signalled by NAPM's speed-of-delivery yardstick. Specifically, some 16% of the respondents now report some slowdown—about four times those who note improved delivery performance.

On the other hand, few PMs queried in ***PW***'s latest monthly procurement survey seem all that concerned. Several, for example, say the increases may only be due to summer shutdowns on the part of some vendors—and that things should be looking better again come fall.

Still others point to still relatively low (under 75%) operating rates. As one purchasing manager put it, "I don't expect any really major problems until factory utilization rates average near 80%—and that's still nowhere in sight."

To be sure, there have been a few problems—notably in the electronic component area—with some ICs said to be on allocation. But this is regarded as a temporary aboration—with improved deliveries likely by fall.

Other signs confirming the overall "no sweat" prognosis include (1) a still cautious inventory strategy (parers still outnumber accumulators) and the absence of any major forward ordering surge (only a small 15% of respondents are ordering 90 days or more in advance for production materials). Indeed, those ordering on a "hand-to-mouth" basis actually tended to edge up over the past few months.

Leadtimes and availability

Chicago: Semiconductor waits are out to 20-24 weeks. The same for ICs, where some items are now on allocation. Also out are electrical materials (1-2), MRO supplies (2), brass and copper sheet (8), brass and copper tube (8), PVC resins (2-4), and c-r steel sheet (10). But lumber is in a bit (to 1-2).

Cleveland: Slight extensions in coil coating paint (3-4) and polyethylene (2-3). Not much change elsewhere, with these average weekly waits: aluminum (8-10), 2-ply fiber drums (2), steel canisters (6), corrugated boxes (3), alloying materials (on demand), glassines and greaseproof papers (4-5), skids (3), and strapping (3).

Los Angeles: In a bit (in weeks) are grey iron castings (10), pumps (8-10), rubber hose (3-5), aluminum sheet (4-5), heavy duty steel (10-12), and silbrazed fittings (13-17). But there are some stretchouts for insulation materials (9-11), electromechanical devices (8-9), electric cables (21-26), and heavy copper tubing (17-22).

BUSINESS DATATRAK

Houston: Cast steel valves (1500 psi and up) have come in considerably (to 9-35 weeks)—as simpler types are ordered. There's some talk of a stretchout before too long in oil field equipment as the rig count begins to rise. No change in MRO supplies (2-4), packaging (0-4), mill steel (4-8), and electronic parts (4-6).

Philadelphia: Spray styrofoam is in to two days. But corrugated boxes (still two weeks) could stretch a bit by fall. Other itms (unchanged in weeks) include wooden pallets (1-2), polyethylene plastic bags (2), xerographic paper (1), stainless bar (5-7), stainless rod and tubing (4-6), aluminum from mill (8).

Pittsburgh: Some delays in large tin orders (over 5000 lb)—to 8 weeks. Most other alloying materials remain unchanged in the 2-3 week range. Ditto polyethylene and PVC resins (4), corruagated boxes (2-3), folding boxes (3-4), all types of drums (1), steel strapping (2-3), lumber (3-4), coil coating paint (5).

Leadtimes (in weeks)

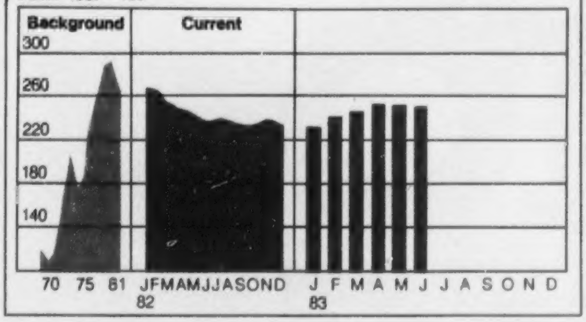
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	7	7	5
C-R Sheet (Chgo)	10	8½	4½
Plate (Phil)	4½	4½	4½
Plate (Chgo)	2½	2½	2
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	4½	4½	5
H-R Bars (Chgo)	2½	2½	2
Cold-Drawn Bars (Phil)	4½	4½	6
Galvanized (LA)	4½	4	4
Galvanized (Chgo)	7	7	4½
Structurals (Chgo)	2½	2½	2
Structurals (Hous)	17	17	17
Tubing (Phil)	6	6	19
Grey Iron Castings(LA)	10	12	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	7	7	7
Pipe, Carbon (Hous)	13	13	26
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	8½	8	9
ICs (Linear) (Phil)	11	11	12
Motors (Phil)	21	21	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	7	7	7
Relays (Chgo)	15	15	15
Resistors (Chgo)	10	10	10
Resistors, Wirebound (Phil)	10	10	10
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	2	2½	2½
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	1/5	1/5	1/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	1
Naphthalene (Chgo)	2	2	2
Paint (LA)	4½	4½	4
Paint, Coil Coating (Pgh)	4	4	3
Paint, Maint. (Clev)	2	2	1½
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	2½	2	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2½	2	½
PVC Resin (Pgh)	4	4	4
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	4
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	4½
Cartons, Corrugated (Clev)	3	3	3
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	4½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	4	4	5
Shrink Film (Clev)	3	3	3
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	11	11	7½
Aluminum Plate (Chgo)	9	9	7
Aluminum Sheet (LA)	4½	5½	5½
Aluminum Sheet (Chgo)	11	11	8
Brass Castings (LA)	8½	8½	9
Brass Rods (Chgo)	3½	3½	2½
Brass Sheet (Chgo)	8	5½	5
Brass Tube (Chgo)	8	5	9
Copper Fittings (LA)	5½	5½	4½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	6½	6½	4½
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	3
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	12	12	22
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	52	52	56
Compressors, Reciproc. (Hous)	39	39	45
Fasteners (Chgo)	½	½	½
Fasteners (LA)	4	4	5
Fasteners, Std. (Phil)	3½	3½	3½
Heat Exchangers, Carbon-alloy Steel (Hous)	30	30	30
Heat Exchangers, Hi-pressure (Hous)	43	43	43
Insulation Mat'l. (LA)	10	9	11
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1	1
Pumps (Hous)	41	41	41
Pumps (LA)	9	10	10
Rubber, Synthetic (LA)	2	2	1½
Rubber Hose (LA)	4	6	6
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	8	8	13
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month	249.9
Month before	251.5
Year ago	232.2

Index: 1967 = 100



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	347.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	22.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	22.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	24.40
Steel, bars, divd. Phila., cwt., merchant quality	17.50	17.50	14.35
Steel, bars, Pitts, cwt.	17.50	17.50	14.35
Steel, bars, C.R., Pitts, cwt.	26.00	26.00	31.00
Steel, plates, Pitts., cwt.	25.75	25.75	24.25
Steel, plates, H.R., Pitts., cwt.	25.75	25.75	24.25
Steel, sheets, C.R., Detroit, cwt.	26.15	26.15	24.65
Steel, strip, C.R., Chi., cwt.	29.05	29.05	29.05
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.705	0.695	0.460
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	4.95	4.95	4.60
Brass, red, 85%, [sheet], lb.	1.28	1.29	1.14
Brass, yellow, [sheet], lb.	1.22	1.23	1.08
Cadmium, ton lots, lb.	1.15	1.15	1.00
Copper, electrolytic, wire bars, refd., lb.	0.78	0.80	0.73
Copper sheet, over 24 in., lb.	1.37	1.38	1.23
Lead, common, N.Y., lb.	0.200	0.195	0.270
Magnesium, pig ingot, [99.8%], lb.	1.38	1.38	1.34
Mercury, 20 fl. lots, N.Y., fl.	280.00	300.00	362.00
Molybdenum Climax Oxide/bags, lb.	4.65	4.65	8.50
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	11.51	11.09	5.89
Tin, Straights, N.Y., lb.	6.71	6.63	6.25
Zinc, Prime West, East St. Louis, lb.	0.40	0.40	0.37
Zinc, die casting alloy, No. 3, lb.	0.465	0.465	0.435
PAPER			
Uncoated book 13 offset, ton	680.00	680.00	800.00
Watermarked bond, ton	845.00	845.00	845.00
Gummed sealing tape, carton	15.42	15.50	15.70
Boxboard, mach. clay ctd. recycled sheets 80 bright, .016, ton	475.00	475.00	475.00
Wrapping paper, std. distribution cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	270.00	270.00	270.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.236	0.246	0.236
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	0.99	0.99	1.00
Cotton middling, 1", N.Y., lb.	0.714	0.704	0.659
Printcloth, 48", 80x80, N.Y., spot. yd.	0.600	0.580	0.610
Army duck, 37", 13 oz., yd.	1.63	1.63	1.00
Blended printcloth, 64", 78x54, yd.	0.695	0.670	0.590
20s combed yarns	1.72	1.72	1.72
Wool tops, N.Y., lb.	3.60	3.60	3.60

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	0.43	0.43	0.46
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	150.00	150.00	210,00
Benzene, petroleum, tanks, Houston, gal.	1.50	1.50	1.51
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.66	0.66	0.66
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	0.106	0.106	0.101
Glycerine, synthetic, tanks, lb.	0.730	0.730	0.805
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.480	0.480	0.715
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.275	0.275	0.330
Polyethylene resin, low density liner film grade (market price), lb.	0.38	0.32	0.24
Polypropylene, homopolymer grade (market price), lb.	0.40	0.35	0.38
Polystyrene, general purpose grade (market price) lb.	0.39	0.40	0.38
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.310	0.300	0.325
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	132.50	132.50	147.50
Sulphuric acid, 66%, commercial, tanks, ton	56.35	56.35	93.69
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.33	1.42	1.45
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	348.50	334.45	290.78
Lumber 2x2, pine, mbf, cl	341.60	335.15	292.67
Plywood, plyform, 3/4", msf, cl	558.10	540.80	583.55
Plywood, 5/8", msf, cl	363.05	345.15	337.09
Cement, bulk, ton, tl	61.89	61.89	62.42
Sand, ton, cl	5.95	5.97	6.09
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	45.57	45.78	45.78
Crushed stone, 1½", ton, cl	7.89	7.89	7.93
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.75	0.76	0.75
Gypsum sheathing, ½"x1"x8", msf, tl	168.93	168.09	155.88
Brick, common, per thousand, tl	172.30	172.30	175.70
Asphalt paving, AC-20	155.88	156.72	156.77
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.63	6.63	6.64
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	24.75	23.30	24.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	31.00	29.75	32.55
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.890	0.875	0.996
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.888	0.885	0.990
Heating oil, No. 2, Chi., bulk, gal.	0.810	0.798	0.975
Heating oil, No. 2, N.Y., bulk, gal.	0.853	0.853	0.959
Heavy fuel, PS 400, Los Angeles, rack, bbl.	25.98	26.50	26.60
Jet kerosene, gal.	0.795	0.780	0.890
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.490	0.490	0.340
SCRAP MATERIALS			
Steel, No. 1, hvy., divd., Pitts., ton	74.00	72.00	59.00
Steel, No. 1, hvy., divd., Chi., ton	68.00	69.00	51.00
Copper, No. 1, East, wholesale buy, divd., lb.	0.680	0.680	0.480
Copper, No. 2, East, wholesale buy, divd., lb.	0.605	0.600	0.425
Brass, red, East, wholesale buy, divd., lb.	0.640	0.640	0.450
Brass, yellow, East, wholesale buy, divd., lb.	0.350	0.385	0.300
Alum., old sheet/cast, E., wholesale buy, divd., lb.	0.385	0.390	0.225
Alum., mixed clip., E., wholesale buy, divd., lb.	0.415	0.420	0.240
Zinc, old, East, wholesale buy, divd., lb.	0.090	0.090	0.100
Lead, clean solids, East, wholesale buy, divd., lb.	0.110	0.110	0.130
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	25.00	7.00
Paper, old corrug. box, dlr., N.Y., ton	20.00	20.00	6.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.09	0.10	0.06
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.35	0.36	N.A.

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

WHAT PMs ARE THINKING

Smart buying will help keep freight rates under control

It's beginning to look like another 12 months of fairly clear sailing on the freight rate front.

True, purchasing managers responding to a new, nationwide ***PurchasingWorld*** survey do anticipate some acceleration through mid-1984 (62% see bigger increases, versus the 23% who are hoping for smaller ones and the 15% looking for no change). But, by and large, the expected average freight hike is expected to remain well within the single-digit range.

Observes one midwestern executive 'Deregulation—combined with excess capacity, some shifting of traditional shipping routes, and relatively stable fuel costs—should do the trick. Indeed, with new contractual arrangements, we've actually been able to pare some freight costs."

The latter is amply confirmed by other survey resondents—with one or two large-volume buyers saying that longterm pacts in some instances have been able to save their firms as much as 25% on freight costs. But these are the exceptions more than the rule—with the typical savings from by such contracts put in the range of 5-10%.

But such pacts, as useful as they are, won't be enough to prevent some cost creepup. The survey reveals expectations of a 6% average freight rate advance for the typical purchase mix over the next 12 months.

Even so, the number is encouraging. It's only about 1½ percentage points above the extremely low 4% average boost reported in the recession-plagued late 1982-early 1983 period. Equally resassuring, only about three out of 10 purchasing executives expect increases to run in the "7% or above" range over the next 12 months.

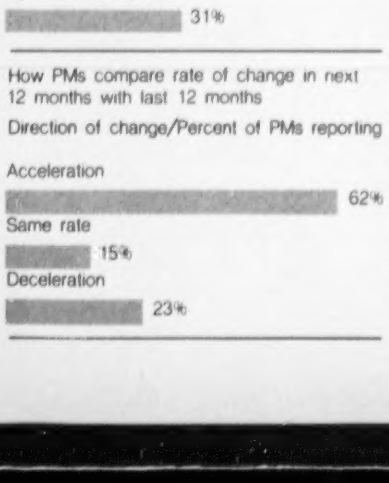
The new survey, however, suggests significant rate-hike differences among the various modes. Air cargo tabs, for example, are expected to rise anywhere from 7% to 10% over the next year—several percentage points above estimated advances in the truck and rail sectors.

This overall pattern is confirmed by the latest Wharton econometric projections. The big Philadelphia-based consulting firm's model suggests these increases for calendar 1983 and 1984, respectively: rail (5.0% and 6.8%), motor freight (6.0% and 8.2%), and air cargo (9.0% and 9.3%).

Another significant survey finding: PMs are burning the midnight oil in an effort to keep freight costs within bounds. Aside from longterm contracts, a growing number are looking at alternate shipping approaches.

Standard Oil of Indiana, for instance, talks of the need to develop alternate routing for its chemical group to get away from reliance on one railroad. As a company spokesman puts it, "We found we could barge rail cars to a different railhead—and negotiated a deal. While we never did make the change, it did force our regular rail carrier to sweeten his offer."

Freight cost trends



In another area, one buyer tells of a shift from truck to TOFC (trailer on flat car) which saved his company 3-5% in overall shipping costs. This is confirmed by another recent study, which shows that TOFC savings now average over 20¢ per vehicle mile vis a vis a Teamster-operated over-the-highway tractor on movements greater than 300 miles.

Not surprising, Beatrice Foods (one of the top 10 U.S. food firms) says it is considering shifting from extensive use of its own massive private truck network to using piggyback rail for longhaul shipments, with regional trucking companies used for local pickup and delivery.

Nor is the trend toward piggyback the only shift being considered. One buyer, for example, says that due to favorable longterm trucking deals, he is going the other way—from rail to truck. He says that 120,000-lb carlot shipments that cost him $3.05/cwt have been shifted to 40,000-lb truckloads costing only $2.25/cwt.

Air, too, is getting increased attention. One PM notes good rates are permitting "the movement of shipments aloft." The airline industry is also optimistic on this score; a recent Boeing projection puts the annual growth rate for world air cargo in the 5-6% range through 1995.

Other cost-cutting strategies mentioned by respondents include (1) shifts to private fleets (one firm says this has yielded a 15% saving), (2) increased use of brokers, (3) more use of shipping associations. ***PW***

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PurchasingWorld

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Exclusive survey: Purchasing salaries in the 500 largest industrials

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Vol. 27, No. 9 - September 1983

Helping you manage the business of buying

6 **Letters**

11 ***PW* Predicts**
Recovery will push prices up

19 **Datatrak**
Key economic trends 19
Current prices 21
Steel scene 24
Procurement status 26
Leadtimes 28
Spot market prices 32

34 **Purchasing Law**
A test for purchasing pros

38 **Value Analysis**
VA principles are action techniques

45 **Purchasing salaries: How they stack up**
The first of a two-part series on ***PW***'s comprehensive survey of purchasing salaries. Part I covers compensation in the top 500 industrial firms.

55 **Setting up an investment recovery program**
You can add to your company's bottom line with an organized program to utilize or dispose of surplus assets. This first of a series of articles tells you why and how.

58 **Suppliers share in progress: Drive for quality at Pontiac**
Pontiac's new Fiero is being introduced this month, and the purchasing department has been involved from day one. Here's fascinating insight into purchasing's role in this major product introduction.

64 **Market conditions to control freight costs**
The combination of continued strong competition and relatively moderate cost pressures should prevent any return to double-digit increases.

69 **Put purchasing on the grid***
Adaptation of a management tool will help you compare your department's professional maturity with that of purchasing organizations in 36 large companies.

73 **Products***

88 **Slight price acceleration "inevitable"**
Respondents to a recent ***PurchasingWorld*** survey suggest that the combination of improving demand, somewhat higher operating rates, and slim vendor margins will eventually push tags up.

95 ***PW TechFile:* Electronic typewriters**
Electronic typewriters are available in a range of models from basic to highly sophisticated. Here's a guide for choosing the one most suited for you.

108 ***PW* Perspective**
They have to blame someone

* Metalworking issues

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PW PREDICTS

Robert S. Reichard, executive editor

Recovery will push prices up

Some modest uptick in overall industrial price averages may be in the making.

So say three out of every four PMs responding to a new ***Purchasing World*** survey. True, the acceleration anticipated over the next 12 months can hardly be described as earthshaking. But, the little-over-4% average gain seen through the first half of 1984 does represent a significant departure from late 1982 and early 1983 when a good many of these same PMs were experiencing relatively stable or even lower prices.

Actually, this kind of projection makes good sense—given the still-low margins reported by many vendors and the gradual approach to better supply-demand balance. On the latter score, the average factory is now operating at near 75% of its potential—up some five percentage points from late-1982 lows.

In any event, an upturn in prices is normal during the initial stages of a business upturn. During the first 12 months following the 1974-75 recession, industrial prices rose about 6%. The situation this time around, however, could be a bit less inflationary. It's taking a bit longer to achieve the levels of market balance that generally enable vendors to post significant hikes.

Then, too, the recovery is still not across the board. Capital equipment, for example, is in the doldrums. One recent survey of 300 industrial firms suggests that machinery costs will be rising at only a 2% annual rate the rest of the year. And some basic raw materials such as steel and copper are lagging earlier expectations.

Another consideration—at least on the consumer level—is the fear on the part of some producers of pricing themselves out of the market. New 1984 autos will only be up a miniscule 2% or so—despite the fact that the annual rate of car sales is up more than 10%.

Finally, there's the continuing good news on the labor front. Relatively small pay hikes, combined with high productivity gains (up 4.3% at annual rate in the second quarter for the overall nonfarm business sector), has made for some first-half declines in unit labor costs. The year as a whole could well end up with a near-zero increase in this key price determinant.

Next year, of course, could be another story. By then, the productivity offset won't be quite as strong. Also, wage increases are bound to accelerate a bit.

Nevertheless, most econometric forecasting models remain quite optimistic—putting the 1984 unit labor cost increase in the still-moderate, 4-5% range—pretty consistent with the 4%-or-so increase in procurement costs projected by the latest ***Purchasing World*** survey.

Copper

The summer doldrums have kept the red metal on the defensive—with demand continuing to disappoint and prices backing and filling in the low 80¢/lb range. Stocks, too, continue to edge higher—with combined LME and Comex holdings up over 600,000 metric tons (a 5-year high).

Nevertheless, there is talk of a seasonal fall pickup—though earlier forecasts calling for 90¢/

Energy

Uncle Sam is becoming increasingly optimistic about holding the energy price line.

Taking a second look at the 12-month period ending mid-1984, Energy Department analysts have actually lowered projections on six of eight sectors they regularly monitor (see table). Substantial downward adjustments, for example, have been regained for No. 6 residual oil, coal, and electricity rates.

Some of the more specific price projections:

- **Gasoline:** The 1983 average will be 5% under 1982—despite the recently imposed 5¢/gallon Federal excise tax boost.
- **Heating oil:** During the next heating season (fourth quarter 1983-first quarter 1984) retail tags will average 5% under year-earlier figures.
- **Residual oil:** The average first half-1984 retail price is put some 2.6% above year-earlier levels—with the differential betwen oil and natural gas narrowing.
- **Natural gas:** The average cost to residential users will be up 16.6% this year—and 11.6% above year-earlier levels in early 1984.
- **Electricity:** Residential tags will be up only an average of 4.8%. Reason: relatively small increases in fuel input costs.

Energy price trends

	Percent increase, year ending 6/84		
	Earlier estimate	Current estimate	Expected price, mid-1984
Gasoline	0.5%	0.2%	$1.215/gal
No. 2 heating oil, wholesale	−0.7%	1.2%	$0.851/gal
No. 6 residual oil	3.0%	1.0%	$28.82/bbl
Jet fuel	0.8%	0.6%	$0.904/gal
Coal, utilities	5.8%	3.9%	$1.737/mBtu
Natural gas, utilities	12.9%	12.5%	$7.132/mcf
Natural gas, residential	12.0%	12.2%	$4.017/mcf
Electricity, residential	7.0%	4.7%	$0.0759/kwh

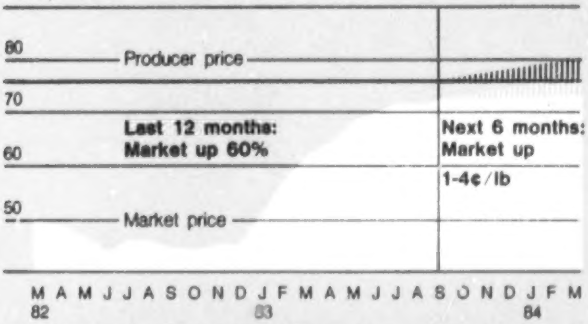
Source: Department of Energy

PW PREDICTS

Aluminum

Aluminum ingot

Cents per lb



CURRENT SITUATION: The light metal is staging a sharp recovery—far more impressive than noted for most competing metals. Domestic shipments are up, producer inventories are down, and prices have firmed significantly. Ingot is now up near the 76¢/lb producer list—**a far cry from the mid-40s low that prevailed through much of last year.** Fabricated tags, too, have moved a lot higher—in some areas by 5-8%.

DEMAND: Orders are still coming in at a brisk clip—suggesting that **total shipments could reach 13.4-billion-lb this year**—up from 1982's low 12.2 billion figure. The upward impetus is coming from several sectors—including automotive, housing, and consumer durables. Packaging is going well, too. But little or no gain is seen for the electrical and machinery areas—both hard hit by the slump in nonresidential investment. **As for the longer pull—annual advances are put in the modest 3% range.**

SUPPLY: Inventories have been pared significantly—and by yearend should be down about a billion pounds from 1982 peaks. **But there's no problem as far as availability is concerned.** While operating rates here in the U.S. have jumped from a beginning-of-the-year low of 56% to the current 70%-plus level, they remain quite low by historical standards. **Nor is any real tightness anticipated over the next few years**—given the capacity cushion.

PRICE OUTLOOK: Further advances are almost certain. But they won't be quite as dramatic, percentagewise, as those posted over the past six months. Better market balance and cost pressures (the average Free World cost is put at near 70¢/lb) suggest a further creepup in ingot toward the 80¢/lb level by early 1984. And what happens to ingot will quickly spread to most fabricated product areas. Longer term, look for still more boosts.

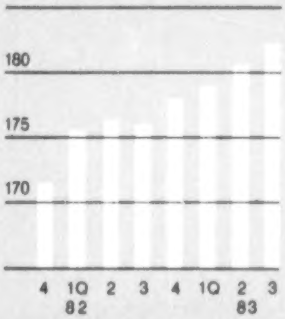
lb-or-higher copper by yearend are beginning to look increasingly unrealistic.

Electronic components

Leadtimes are stretching and prices are moving up in several key areas. Products with the most upward pressure include TTL, LS, and static RAM devices. Current tightness is expected to continue through the end of the year as demand (which in some cases has risen three or four fold over the past few months) exceeds near-term production capabilities. One exception: 64K dynamic RAMs, which are said to be loosening up a bit.

Electronic components

(Index: 1967 = 100)



Zinc

Improved demand—particularly from steelmakers—is keeping prices firm in the low-40s range—the highest level in more than a year and a half.

Other bullish factors: (1) reports that China has purchased as much as 100,000 tons in recent months, (2) relatively low producer inventories, and (3) some spotty tightness in merchant supplies on both the East and West Coasts. European supplies are snugger, too.

Given all this—some further modest firming is possible, with quotes moving up into the mid-40s range before the year is out.

Stainless steel

Recent impositions of higher duties and import quotes are already beginning to take their toll. Some producers, for example, have reduced discounts on stainless sheet by 5%—the equivalent of adding some $100-120/ton onto the service center sales price. Another factor behind the price boost: rising cost pressures—aggravated by some fair-sized boosts in nickel tags over the past year or so.

Paper and paperboard

Demand is up virtually everywhere, with operating rates on most grades above the 90% level. Also worth noting: (1) Producers are now talking about as much as a 6% rise in overall 1983 output, and (2) prices continue to firm—with new hikes announced on a variety of uncoated papers.

There's also talk of linerboard moving up from its current $270/ton level—though it may take another 3-6 months for this key corrugated material to reach its old $300/ton level. One exception to the firming: some coated white papers, where discounts as high as 30% are still reported.

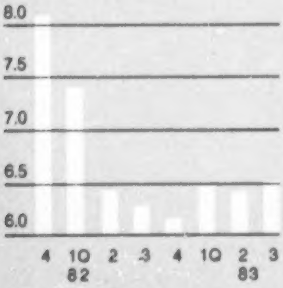
Tin

High Free World stocks will keep prices from rising above the current $6.50-6.75/lb (*Metals Week* Composite) range. Indeed, the general consensus is that quotes would be a lot lower than they are without ITC buffer stock support and producer export controls.

All told, above-ground holdings (buffer stock, mine head, and OSA) add up to a hefty 115,000 tons—the equivalent of more than a 7-month supply. Another price-rise inhibitor: slow consumption gains—from 168,000 tons this year to only 180,000 tons by 1986.

Tin

($/lb) (*Metals Week composite*)



Plant and equipment

Budget for small upward cost pressures over the last six months of the year. So predicts the Kemper Group, a large insurance firm. The projection for equipment suggests only a 1¼% rise during the second half of 1983—pretty much in line with the small 1% rise during the first half. Building cost increases are also expected to be quite small—2.3% over the second half versus 2.1% for the first two quarters.

Molybdenum

Quotes have been stabilized—with producers listing oxide at $4.65/lb and dealers generally pricing in the lower $3.65-4.00/lb range. Industry cutbacks (the Free World is operating at only 30% of its potential) will, of course, have some impact—paring some 13,000-14,000 tons off the global inventories this year.

But there's still a long way to go before true supply-demand balance can be reachieved. Upshot: Any meaningful price increases will have to wait until 1984—and even then they'll be quite modest.

Computers

Cost cutting looks to continue. One example: Apple has launched a package system sale that has dropped overall costs for its *IIe* model by 15%. Chances also look good for more declines in the home computer area. Reasons: Price wars in the low-end market and the impending introduction of new IBM and Apple models.

Portable computers, too,

Plastic resins

CURRENT SITUATION: A broad recovery is under way. Overall sales were up significantly over the first eight months of this year. **Prices, too, have turned a lot more buoyant.** Transaction prices for PVC pipe grade jumped 6¢/lb recently—pushing averages up more than 50% from late-1982 lows. Smaller, though still impressive, boosts have also recently hit ABS resins (up 5¢/lb for pipe grade), polyethylene (up 2-6½¢/lb, depending on grade), polypropylene (up 3¢/lb), and polystyrene (with a 5¢/lb boost expected this month).

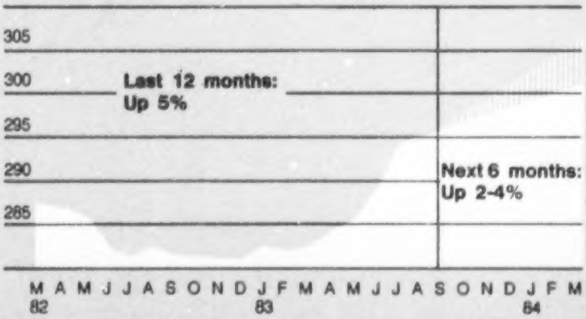
DEMAND: For overall 1983, big commodity resins could be up as much as 8%—more than recouping last year's losses. The situation in reinforced plastics is equally as bullish, with estimated 1983 gains ranging 8-15%. The longer-term prognosis is also fairly optimistic. But talks with both buyers and producers suggest **an annual rate of gain in the 6% range over the 1984-85 period.**

SUPPLY: Markets have come back into better balance—with the wide capacity-demand gap gradually closing. More important, capacity utilization rates of 80% or above are likely to continue into early 1984 for several key resins. On the other hand, there's still a fair amount of new potential coming onstream. **Implication: no real sweat over the next few years**—though some temporary tightness in selected grades can't be ruled out.

PRICE OUTLOOK: More hikes are likely over the next six months. But they're likely to be quite modest, as (1) the market digests the fairly big advances of recent months and (2) feedstock cost increases remain relatively restrained. Competition will also tend to keep longer term hikes within bounds—**with average annual resin price increases of 5-6% anticipated for both 1984 and 1985.**

Plastic resins

Index: 1967=100



are softening—with two industry projections suggesting about a 10% decline over the next year.

Cobalt

Plan on continued softness as heavy inventories continue to overhang the market. Zaire's stocks alone, for example, are put at 14,000-15,000 metric tons—the equivalent of total Free World 1983 demand.

True, production has been cut back significantly—particularly in Zaire (output of 9000 tons versus capacity of 17,000 tons) and Zambia (output of 2100 tons versus capacity of 7400 tons). But with consumption unlikely to rise much, if at all, this year, producers will be lucky to maintain their current low, $5.40-5.60/lb spot levels.

Steel

Latest spot* steel prices

Product	Average price per cwt	Change from previous qtr
Wide flange beams	$15.85	−20%
Carbon plate	$16.83	−14%
Hot-rolled coil	$18.33	−13%
Cold-rolled coil	$20.46	0
Galvanized sheet	$26.75	−1%
Hot-rolled carbon bar	$24.13	0

* The spot market comprises feedback mainly from service centers and metal traders and makes up 5-10% of the total market.

Source: Paine Webber

U.S. spot steel prices remain at bargain-basement levels—but should start moving up by sometime this fall. So says Paine Webber steel analyst Peter F. Marcus.

As for current quotes, Marcus estimates that the average spot price (encompassing six key product lines) has actually declined by about 8% over the latest 3-month period—with most of the drop noted in three key sectors (see table for details). Also suggestive of today's soft market: The average U.S. mill realized a price of $560/metric ton—some $50/ton, or 8%, under official list levels.

But things may be ready to turn up. As Marcus puts it, "Steel buyers should be making forward commitments at today's price levels."

He cites the following factors as contributing to the price pickup he sees ahead: (1) massive mill losses both here and abroad, (2) a rapidly recovering U.S. economy—with signs of pickup noted in Europe and the Pacific basin, (3) increasing world steel products as producers and users stop liquidating inventories, (4) reduced global steel-making capacity combined with probable reluctance to bring on marginal facilities at current price levels, and (5) extremely low mill and user inventory levels.

Solvents

Prices are moving up on a broad front this month. Announced increases include industrial grade perchloroethylene (up 3¢/lb to 25-26¢/lb) and carbon tetrachloride (also up 3¢/lb to as high as 19¢/lb). Blame these metal-cleaning solvent increases on a combination of escalating costs and steadily declining demand, which has also tended to boost unit costs.

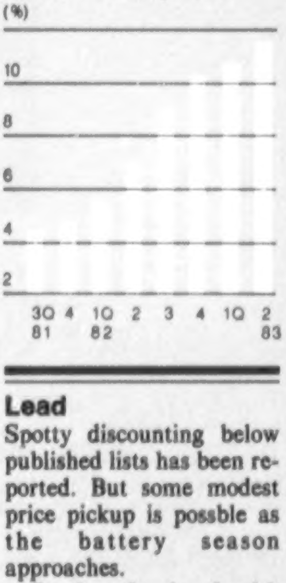
Soda ash

This volume industrial alkali continues to take its lumps—with increasing speculation that prices may decline even further from the already low $84/ton official quote. Behind the softness: Some 2½ million tons of excess capacity which has kept operating rates only around the 70% level for over a year. Demand, except for exports, hasn't been all that robust either. Still another price depressant: inventories—up more than 20% over the past year.

Real estate

Press for deals in both office and industrial sectors. Office vacancies, for example, are now up to near 11.7% according to one recent survey—more than three times the roughly 3½% level prevailing in mid-1980. Even higher rates are noted in such cities as Atlanta, Denver, Portland, Sacramento, San Diego, and Washington, DC. A slow upcreep is noted in industrial space, too—with the latest vacancy rate here put at 4.9%—up from the under-4% level of early last year.

Office vacancy rate



Lead

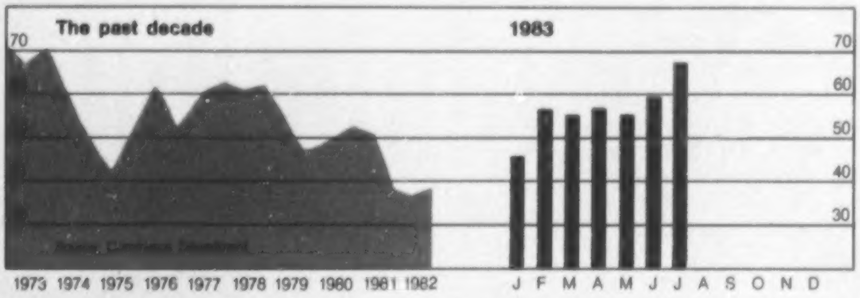
Spotty discounting below published lists has been reported. But some modest price pickup is possble as the battery season approaches.

On the other hand, with (1) U.S. producer inventories still relatively high (close to 100,000 tons) and (2) the use of the metal in gasoline continuing to be phased out—any major recovery seems remote. Indeed, even a 25%/lb price by early 1984 may be unachieveable unless auto production picks up more than expected and/or a colder-than-normal winter increases the demand for replacement batteries. ***PW***

BUSINESS DATATRAK

NAPM business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



KEY ECONOMIC TRENDS

Business advancing at full speed

Year-to-date economic gains continue to exceed earlier expectations.

To be sure, there's increasing talk of a slowdown in the rate of growth by late fall or winter—particularly if interest rates continue to edge higher. But so far this has not impacted on leading indicators—almost all of which continue to point to further solid advances.

Take, for example, the NAPM Business Barometer. As of latest report, this bellwether index had jumped to 67.1 (see chart)—some 17 points above the neutral 50 mark, and the highest level in over a decade.

Heavily weighted with new orders and other grassroots manufacturing measures, the new peak suggests that the next few months will remain solidly in the plus column.

Zero in on some of the more specific sectors of the economy, and the picture is equally encouraging. For example, industrial distributor sales (a time-tested barometer of nearterm production plans) have continued to inch ahead. Traditionally, this measure has signalled changes in output by 1-3 months.

High confidence

Even more bullish is the upswing in the Conference Board's index of business confidence. This yardstick, which measures top management attitudes, registered 76 at latest report—the highest level in the barometer's 7-year history.

This kind of positive feeling cannot be underestimated. Other things being equal, it indicates that the nation's business leaders will be pursuing less cautious production, inventory, and capital spending policies in the months immediately ahead—thereby tending to sustain current growth patterns.

Even the job situation seems to be looking a little better these days. Unemployment, for example, is finally down under the 10% level. Also significant here: Help wanted advertising is up. True, totals are still somewhat under early 1982 highs (see chart alongside). But the slow steady advance in new work opportunities does seem to point to still further nearterm declines in the overall jobless rate.

All things considered, real GNP could show another significant gain over the current (third quarter)—not all that much under April-June's big 8.7% annual rate of increase.

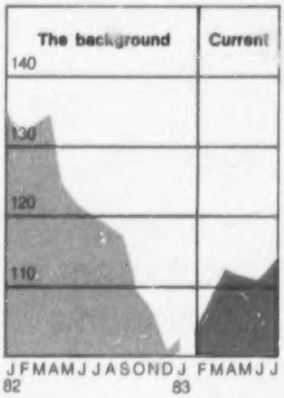
Production rates

Industrial production also looks to continue to sport solid nearterm gains—with double-digit third-quarter annual rates of 80 anticipated for primary metals, fabricated metal products, and transportation equipment.

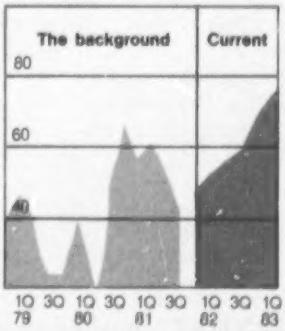
On the other hand, it would be unrealistic to expect these kinds of in-

Leading indicators

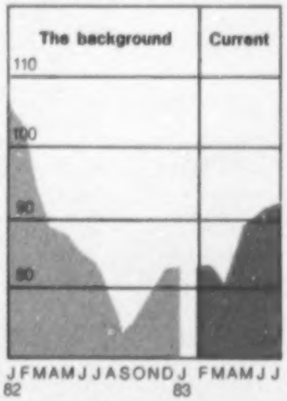
1. Industrial distributor sales
(Index: 1977 = 100)



2. Business confidence index



3. Help wanted index
(1967 = 100)



creases to continue into winter and next spring, because (1) the "catchup" period following the deep 1982 recession will be ending, and (2) interest rates could be edging a bit higher.

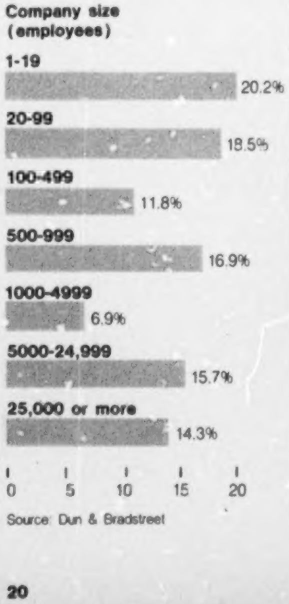
Nevertheless, there's little reason to panic. Even with interest rates up another one percent or so, real GNP gains, at annual rate, still look to remain in the acceptable 3-4% range into early 1984.

Personal computers in purchasing

PMs are not only buying an increasing number of microcomputers for their firms but are also using them more and more for their own buying operations.

A just-released Dun & Bradstreet survey of 2790 companies, for example, finds that 16% of firms owning computers already apply them to one or more purchasing function. Zero in on small firms (1-19 employees) and the percentages utilizing this electronic technology rises to near 20% (see chart).

Purchasing's use of microcomputers



Source: Dun & Bradstreet

More important, the study suggests that business has barely scratched the surface on the possible use of personal computers—both for purchasing and other applications. Some 37% of the larger firms (500 or more employees) still do not have at least one microcomputer officially in use. And the figure rises to over 75% for smaller outfits.

But the latter figure should change fast. Among small firms that do not yet own such units, some 44% say they plan to purchase them in the near future.

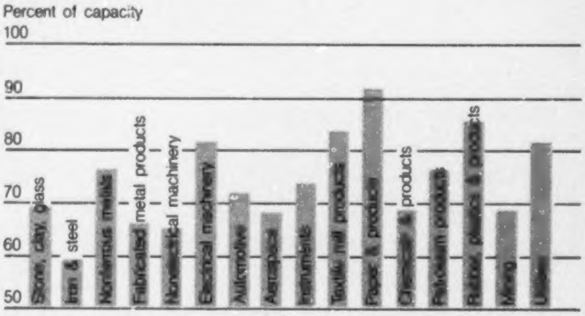
As Joseph Duncan, D&B Corporate Economist, sums it up, "The pace of change is more rapid than anticipated. Indeed, as the recovery picks up steam, and as new software and applications are developed, the impact of the computer revolution may exceed the predictions of even the most optimistic expert."

New data on operating rates

Alert your buyers to new "supply availability" intelligence. Uncle Sam is expanding coverage on both industry capacity and factory utilization rates.

Additions include monthly information on mining, utilities, and detailed manufacturing breakdowns for some 16 individual sectors.

Operating rates: still low



Source: Federal Reserve Board

Generally speaking, the figures confirm the fact that virtually all industries are below their preferred operating levels. Indeed, the gaps in some cases are quite substantial—despite recent gains in overall output.

The relatively low figures, if nothing else, suggest that today's still-potent buyers' market isn't going to disappear overnight. Particularly noteworthy on this score are the under-70% rates prevailing in such key sectors as steel, fabricated metal products, nonelectrical machinery, and chemicals.

As might be expected under these conditions, capacity expansion has slowed down. For the overall economy, less than 2% has been added onto industry potential over the past year—far under the 3-4% gains of some recent years.

And in some of the really glutted areas, gains are even smaller. Indeed, in the case of steel, autos, textiles and petroleum products, production potential is actually declining.

CURRENT PRICES

Offsetting ups and downs

Still no problem with industrial prices—despite the recent increase in both factory orders and sales.

At latest report, for example, Uncle Sam's industrial producer price index was rising at only a 0.4% monthly rate (less than 5% on an annual basis). And the overall rise compared to a year earlier comes to just a shade over 1%.

Credit the overall moderation to offsetting trends—with a fair number of declines helping to balance out new demand-oriented price hikes. In chemicals, for example, while organics posted a fairly substantial advance, inorganics fell sharply (see table for details)—enough, in fact, to make for a small decline in overall industrial chemical averages.

A similar uneven pattern is evident in the fuel and power sector. While gasoline, electric power, and residual fuel all continued to advance, both kerosene and natural gas have actually edged a bit lower.

The same mixed picture is also seen in metals—as late summer easiness in copper and lead offset strength in aluminum and zinc. Equally significant, there has been relatively little change noted in most steel mill products.

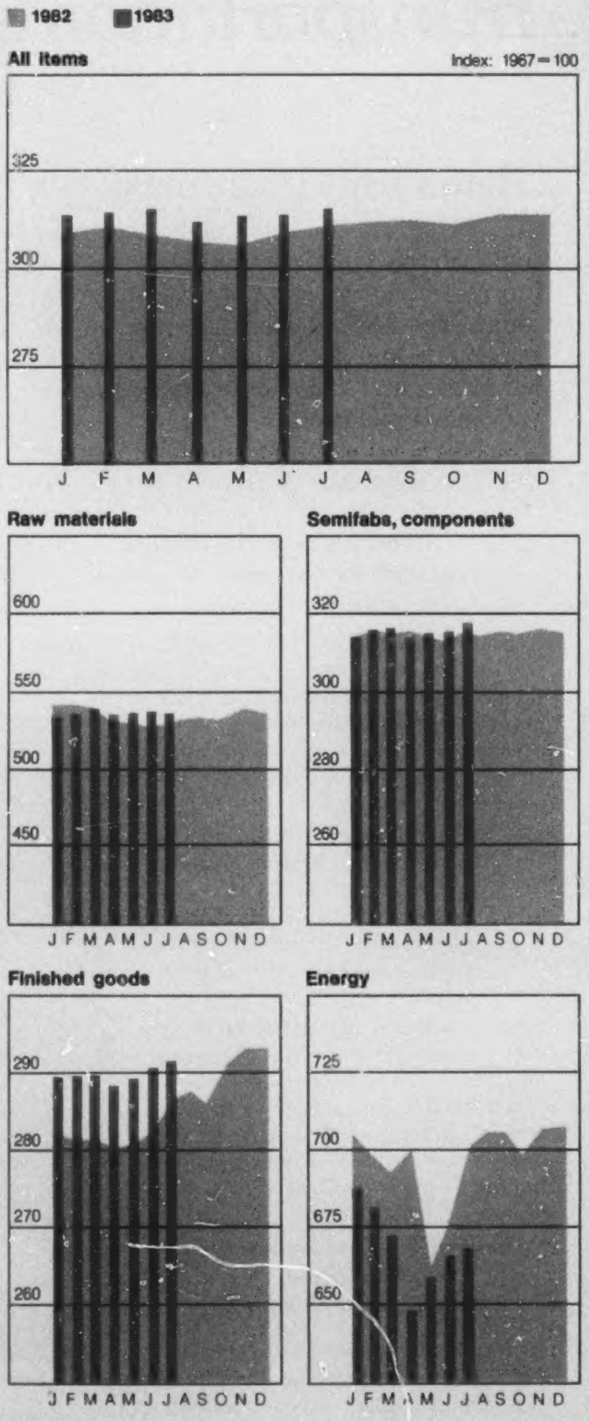
Capital goods, still saddled with poor demand, don't seem to be going anywhere either. True, there were some increases last month—notably in plastic machinery, woodworking machinery, and motors and generators. But it was not enough to make for more than a 0.1% overall boost in this key sector.

Elsewhere, there were some advances in plastic resins, synthetic fibers, hardwood, lumber, electronic components, and motor vehicle parts. But again there were offsetting

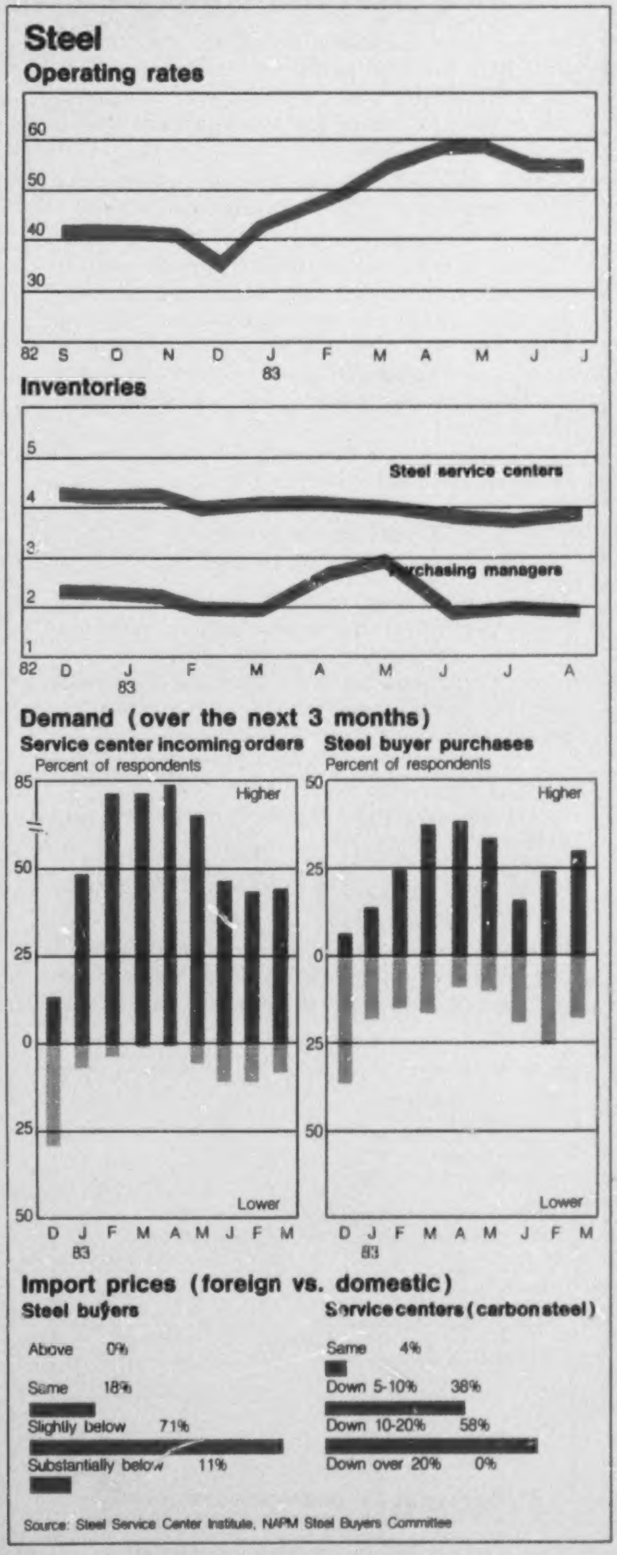
This month's breakdown

	Latest level (July)	% change from: Month ago	Year ago
Bearings	330.9	0.1	-0.9
Bolts, nuts, etc.	266.2	-0.2	-1.5
Chemicals, inorganic	270.0	-9.2	-13.5
Chemicals, organic	372.8	3.7	1.8
Concrete products	302.2	0.3	1.1
Corrugated cartons	242.2	-0.1	-0.9
Cutting tools, small	279.6	-0.4	0.5
Electrical instruments	273.3	0.5	8.8
Electric lamps (bulbs)	313.2	0.9	9.8
Electronic components	269.9	0.7	1.4
Fans and blowers	337.0	0.0	0.7
Foundry and forge products	351.0	0.1	1.5
Fuel oil (residual)	1122.4	1.8	-9.3
Furniture, commercial	287.9	0.3	3.8
Gasoline	621.2	1.3	-9.4
Glass, flat	229.8	0.0	1.6
Glass containers	351.7	0.0	-1.8
Gypsum products	276.0	0.9	7.9
Hand tools	345.4	0.2	0.7
Hand tools, power driven	222.4	0.6	0.0
Industrial furnaces	361.7	0.1	2.0
Integrating and measuring instruments	223.8	0.2	5.6
Internal combustion engines	341.2	-0.4	3.9
Lubricating oil	776.0	0.0	-12.6
Lumber millwork	296.1	0.5	4.9
Material handling equipment	284.8	-0.1	-0.7
Metal containers	337.4	0.2	2.2
Metal mill shapes (nonferrous)	310.2	1.0	4.3
Metal tanks	306.2	0.0	-1.7
Motors and generators	322.3	2.6	7.6
Motor trucks (10,000 lb and under)	313.5	0.2	3.4
Office and store equipment	154.6	0.2	1.7
Paperboard	249.5	0.0	-2.2
Paper boxes and shipping containers	247.9	0.3	-0.8
Paper office supplies	226.8	-2.2	0.1
Paint	265.6	0.2	0.3
Plastic resins	290.6	0.5	3.5
Precision measuring tools	264.4	0.4	3.2
Pumps and compressors	347.7	0.1	0.0
Refractories	338.7	0.4	-0.5
Rubber belts and belting	330.5	0.0	2.5
Scales and balances	228.6	0.4	0.7
Steel products	347.0	0.2	0.0
Switchgear	267.6	-0.1	1.0
Textiles, synthetic fibers	159.1	1.6	-1.5
Textiles, gray fabrics	146.0	0.1	0.8
Tires and tubes	242.7	-0.5	-4.8
Transformers and power regulators	224.1	0.0	0.3
Welding equipment	272.7	0.0	-1.9
Wire and cable	204.4	-0.5	1.5

Industrial prices at a glance



Source: Bureau of Labor Statistics



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

weaknesses—this time in internal combustion engines, tires, softwood lumber, and metal-forming machine tool parts.

Where do we go from here? Several economists contacted by ***PW*** see some modest acceleration toward yearend as supply-demand gaps narrow. Even so, most feel the average 1983 gain in overall industrial tags (vis a vis 1982) can be held to 2-3%.

STEEL SCENE

New hopes for rising steel orders

Steel demand could show some substantial fourth-quarter improvement after a relatively lackluster summer.

So say both purchasing executives and steel service centers. An NAPM survey of the former, for example, finds that some 29% of the respondents now anticipate increasing their purchases of steel over the next few months—significantly above the 19% who say that new metal receipts will probably drop off a bit.

Distributors are even more optimistic on the demand score—with the 45% who now see an increase in their incoming orders over the next three months running better than six times above the small 7% who feel their business could fall off.

This optimism is seconded by Steel Service Center Institute president Andrew Sharkey who, citing year-to-date performance, suggests that "our original estimate of a 10% yearly gain may prove to be conservative."

Mills, too, are hopeful of a fall business pickup—with most still hoping the industry will ship some 19 million tons in the last three months of the year—enough to bring the yearly total up to within shooting distance of 70 million tons. While hardly earthshaking, that would still represent a substantial increase over last year's disappointing 61.6-millon-ton total.

Inventories

More important, if these gains do materialize, they will represent increases in consumption rather than any new inventory buildup. Reason: Both buyers and distributors who have spent upwards of a year bringing stock levels down to bare minimum levels say they mean to keep them that way.

Indeed, response from buyers and service centers indicate that, on average, holdings could well continue to edge lower. More respondents in both groups say they'll be paring rather than accumulating in the months immediately ahead.

One factor here—aside from still-high carrying costs—could be the continuing ready availability of metal. Indeed, with mills operating at around only 55% of their potential (AISI basis), few anticipate any supply problems developing over the remainder of the year.

Mills, too, would seem to support projections for

BUSINESS DATATRAK

continued inventory caution. For instance, John Judkins, vice president of sales for Inland Steel Co., sees some additional stock reduction by yearend, adding that it will be next year that mills see any customer inventory buildup.

Imports
Meantime, import prices continue to be extremely attractive. Virtually all service centers, for instance, report lower tags on incoming carbon steel shipments—with some 58% putting the advantage in the 10-20% range.

An even larger 60% say the same kind of price break is available on stainless steel—though, unlike the previous month, not one now reports stainless gaps in excess of 20%.

Steel buyers tell much the same story as far as imports are concerned. Specifically, 71% indicate foreign quotes are slightly below their domestic counterparts—with another 11% dubbing the advantage as "substantial."

Not surprisingly, overall dependence on imported steel is expected to remain at roughly today's high levels—as the few who contemplate reductions are offset by others who plan on upping their foreign tonnages.

PROCUREMENT STATUS

Only spotty leadtime increases

Recent sharp increases in demand are having only minimal impact on vendor performance.

That's not to say that scattered problems aren't cropping up. Some electronic components, for example, have suddenly become tight. But look at overall averages, and things still seem to be pretty much under control.

And even in electronic parts, the situation is regarded as temporary. Several PMs, for example, say they expect improved deliveries by early 1984 as suppliers rev up new capacity.

Indeed, ***PW's*** exclusive leadtime index is still only slightly above the neutral 50 mark. Specifically, while some 20 items of the more than 150 product lines regularly monitored by the index have stretched out over the past month, the delays have generally been quite modest. Equally significant, declines in 12 other items have tended to blunt the overall effect.

Look at NAPM's speed-of-delivery survey and the same, basically "no sweat" situation is indicated. While the study finds 21% of the respondents noting some slowdown, the figure is nowhere near the 50% figure reported in 1979 during the last business upturn.

One thing for sure, few PMs feel the need to lay in any extra inventories. In fact, those adding and subtracting from stocks just about balance each other out—a pretty conservative policy given today's rising production schedules.

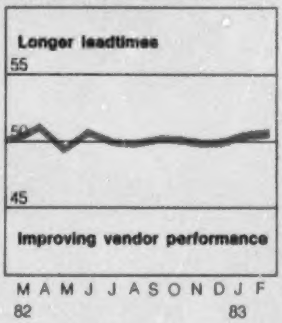
Similarly, only about 15% say they're committing 90 days or more in advance for production materials—a figure that has remained virtually unchanged over the last few months.

As one ***Purchasing World*** respondent sums it up, "I only start to worry when our major suppliers start operating above 82-83% of their potential—and that still seems a long ways off.

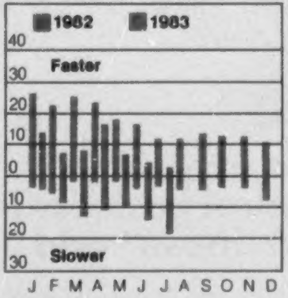
Government figures would certainly seem to back up this appraisal. Even with the sharp production gains racked up over the past two quarters, the average factory utilization rate is still just barely over the still relatively low 76% level. ***PW***

Monthly procurement status report

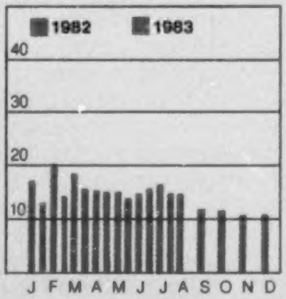
Leadtime index
A 'diffusion' index based on 158 key commodities. Above '50' indicates a tendency for leadtimes to stretch out. Below '50' suggests improving vendor performance.



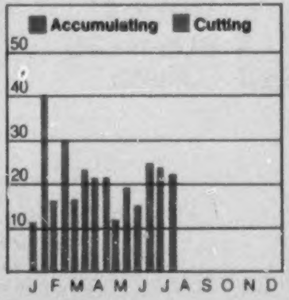
Delivery performance
Percent reporting deliveries



Forward commitments



Inventory strategy
Percent of respondents



Source: NAPM

Leadtimes and availability

Chicago: Some electrical items from distributors are taking a bit longer. Ditto, MOS semiconductors (to 16-24 weeks), common process stearates (1-2), and cold-rolled steel sheets (10). But while some integrated circuits are on allocation, averages are in a bit (to 14-24). Quicker delivery on copper sheet, too.

Cleveland: Coil coating paint is out fractionally (to 3-4 weeks). So are polyethylene (to 2-3) and cold finish aluminum (to 10). Unchanged are polyvinyl chloride (2-3), 2-ply fiber drums (2), steel canisters (6), alloying materials (on demand), glassine and greaseproof papers (4-5), lumber (3), plastic film (3), and strapping (2-3).

Los Angeles: Offsetting stretchouts and improvements here. Going out (with new leads in weeks) are galvanized steel (6), grey iron castings (12), rubber hose (5-7), aluminum sheet (5-7), and stainless (5-7). But in a bit are electromechanical devices (8), copper tubing (6), heavy duty steel (11-13), and electric cable (13-17).

BUSINESS DATATRAK

Houston: Some narrowing of leadtimes for both high-pressure heat exchangers (to 17-26 weeks) and alloy and carbon steel heat exchangers (to 13-26). Reason: increased availability of shop space. No changes in MRO items (2-4), packaging (0-4), mill steel (4-8), service center steel (1-2), and tungsten carbide parts (14-18).

Philadelphia: Slightly reduced waits (in weeks) for standard taps (4), grinding wheels (4-5), carbide tools (8), paper towels and tissue (1-2), xerographic paper (mostly out of stock), and corrugated boxes (3). But out somewhat is trichloroethylene (1½-2). Some talk of future extensions in extrusions and castings, too.

Pittsburgh: Slight reductions in small tin shipments (to 1-3 weeks). Most other items remain relatively unchanged—including polyethylene and PVC (4), alloying materials (2), fabricated copper products (6), corrugated boxes (2-3), folding boxes (3-4), drums (1), strapping (2-3), seals (1), and lumber (3-4).

Leadtimes (in weeks)

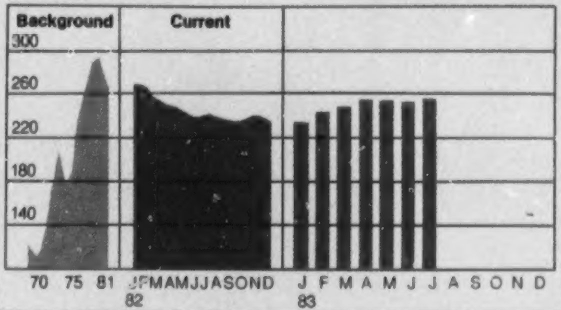
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	7	7	5
C-R Sheet (Chgo)	10	10	4½
Plate (Phil)	4½	4½	4½
Plate (Chgo)	2½	2½	2
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	4½	4½	5
H-R Bars (Chgo)	2½	2½	2
Cold-Drawn Bars (Phil)	4½	4½	6
Galvanized (LA)	6	4½	4
Galvanized (Chgo)	7	7	4½
Structurals (Chgo)	2½	2½	2
Structurals (Hous)	17	17	17
Tubing (Phil)	6	6	19
Grey Iron Castings(LA)	12	10	9
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	7	7	7
Pipe, Carbon (Hous)	13	13	20
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	8	8½	8½
ICs (Linear) (Phil)	11	11	12
Motors (Phil)	21	21	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	7	7	7
Relays (Chgo)	15	15	15
Resistors (Chgo)	10	10	10
Resistors, Wirebound (Phil)	10	10	10
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	2	2	2
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	1/5	1/5	1/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4½	4½	4
Paint, Coil Coating (Pgh)	4	4	3
Paint, Maint. (Clev)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	2½	2½	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2½	2	½
PVC Resin (Pgh)	4	4	4
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	4
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	4½
Cartons, Corrugated (Clev)	3	3	3
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	4½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	4	4	5
Shrink Film (Clev)	3	3	3
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	11	11	7½
Aluminum Plate (Chgo)	9	9	7
Aluminum Sheet (LA)	6	4½	5½
Aluminum Sheet (Chgo)	11	11	8
Brass Castings (LA)	8½	8½	8½
Brass Rods (Chgo)	3½	3½	2½
Brass Sheet (Chgo)	5	5	5
Brass Tube (Chgo)	6½	8	9
Copper Fittings (LA)	5½	5½	4½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	6	6½	4½
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	3
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	12	12	22
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	52	52	56
Compressors, Reciproc. (Hous)	39	39	45
Fasteners (Chgo)	½	½	½
Fasteners (LA)	4	4	8
Fasteners, Std. (Phil)	3½	3½	3½
Heat Exchangers, Carbon-alloy Steel (Hous)	20	30	30
Heat Exchangers, Hi-pressure (Hous)	21	43	43
Insulation Mat'l. (LA)	9½	10	11
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1	1
Pumps (Hous)	41	41	41
Pumps (LA)	9	9	10
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	6	4	6
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	8	8	13
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month 254.5
Month before 250.5
year ago 237.0

Index: 1967 = 100



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	347.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	24.40
Steel, bars, dlvd. Phila., cwt., merchant quality	17.50	17.50	14.35
Steel, bars, Pitts, cwt.	17.50	17.50	14.35
Steel, bars, C.R., Pitts, cwt.	26.00	26.00	31.00
Steel, plates, Pitts., cwt.	25.75	25.75	24.25
Steel, plates, H.R., Pitts., cwt.	25.75	25.75	24.25
Steel, sheets, C.R., Detroit, cwt.	26.15	26.15	24.65
Steel, strip, C.R., Chi., cwt.	29.05	29.05	29.05
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.735	0.705	0.460
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cast ingot, lb.	4.95	4.95	4.60
Brass, red, 85%, [sheet], lb.	1.29	1.28	1.16
Brass, yellow, [sheet], lb.	1.23	1.22	1.11
Cadmium, ton lots, lb.	1.15	1.15	1.00
Copper, electrolytic, wire bars, refd., lb.	0.79	0.78	0.69
Copper sheet, over 24 in., lb.	1.38	1.37	1.25
Lead, common, N.Y., lb.	0.20	0.20	0.26
Magnesium, pig ingot, [99.8%], lb.	1.38	1.38	1.34
Mercury, 20 fl. lots, N.Y., fl.	275.00	280.00	345.00
Molybdenum Climax Oxide/bags, lb.	4.65	4.65	8.50
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	11.62	11.51	6.97
Tin, Straits, N.Y., lb.	6.49	6.71	6.22
Zinc, Prime West, East St. Louis, lb.	0.43	0.40	0.37
Zinc, die casting alloy, No. 3, lb.	0.465	0.465	0.435
PAPER			
Uncoated book 13 offset, ton	680.00	680.00	800.00
Watermarked bond, ton	845.00	845.00	845.00
Gummed sealing tape, carton	15.50	15.42	15.70
Boxboard, mach. clay ctd. recycled sheets 80 bright, .016, ton	475.00	475.00	475.00
Wrapping paper, std. distribution cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	270.00	270.00	270.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.252	0.236	0.238
Cotton drill, 1.65, 59", 68x49, N.Y., yd.	0.96	0.99	0.96
Cotton middling, 1", N.Y., lb.	0.743	0.714	0.621
Printcloth, 48", 80x80, N.Y., spot. yd.	0.63	0.60	0.58
Army duck, 37", 13 oz., yd.	1.63	1.63	1.00
Blended printcloth, 64", 78x54, yd.	0.710	0.695	0.590
20s combed yarns	1.78	1.72	1.72
Wool tops, N.Y., lb.	3.60	3.60	3.60
CHEMICALS			
Acrylonitrile, tanks, lb.	0.43	0.43	0.46
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	150.00	150.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.51	1.50	1.50
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.58	0.66	0.66
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	0.106	0.106	0.101
Glycerine, synthetic, tanks, lb.	0.730	0.730	0.805
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.480	0.480	0.715
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.275	0.275	0.330
Polyethylene resin, low density liner film grade (market price), lb.	0.38	0.38	0.25
Polypropylene, homopolymer grade (market price), lb.	0.37	0.37	0.38
Polystyrene, general purpose grade (market price) lb.	0.37	0.37	0.38
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.340	0.310	0.335
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	132.50	132.50	147.50
Sulphuric acid, 66%, commercial, tanks, ton	56.35	56.35	93.69
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.33	1.33	1.45
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	346.50	348.50	289.73
Lumber 2x2, pine, mbf, cl	345.30	341.60	294.23
Plywood, plyform, 3/4", msf, cl	565.15	555.10	574.55
Plywood, 5/8", msf, cl	365.85	363.05	342.99
Cement, bulk, ton, tl	62.35	61.89	62.42
Sand, ton, cl	5.95	5.97	6.02
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	45.73	45.54	46.35
Crushed stone, 1½", ton, cl	7.90	7.89	7.75
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.75	0.75	0.75
Gypsum sheathing, ½"x1"x8", msf, tl	167.99	168.93	156.04
Brick, common, per thousand, tl	171.95	172.30	176.05
Asphalt paving, AC-20	157.00	155.88	155.38
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.69	6.63	6.58
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	25.25	24.75	23.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	31.25	31.00	32.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.865	0.890	1.006
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.883	0.888	0.990
Heating oil, No. 2, Chi., bulk, gal.	0.829	0.810	0.940
Heating oil, No. 2, N.Y., bulk, gal.	0.858	0.853	0.940
Heavy fuel, PS 400, Los Angeles, rack, bbl.	25.98	25.98	25.00
Jet kerosene, gal.	0.825	0.795	0.885
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.490	0.490	0.330
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	79.00	74.00	58.00
Steel, No. 1, hvy., dlvd., Chi., ton	73.00	68.00	51.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.690	0.680	0.550
Copper, No. 2, East, wholesale buy, dlvd., lb.	0.615	0.605	0.485
Brass, red, East, wholesale buy, dlvd., lb.	0.655	0.640	0.510
Brass, yellow, East, wholesale buy, dlvd., lb.	0.365	0.350	0.305
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	0.430	0.385	0.320
Alum., mixed clip., E., wholesale buy, dlvd., lb.	0.450	0.415	0.245
Zinc, old, East, wholesale buy, dlvd., lb.	0.095	0.090	0.105
Lead, clean solids, East, wholesale buy, dlvd., lb.	0.103	0.110	0.160
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	25.00	7.00
Paper, old corrug. box, dlr., N.Y., ton	20.00	20.00	6.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.095	0.090	0.130
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.35	0.35	0.34

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

FOR THE TOP 500 COMPANIES

PURCHASING $ALARIE$

HOW THEY STACK UP

Lea Tonkin, management editor

Is your salary keeping up with the times? For some top performers in purchasing and materials management, pay levels are vaulting upward, well ahead of inflation's sting.

But this year's ***PurchasingWorld*** survey of the nation's 500 largest industrial firms shows significant variation in average pay gains for the past two years—from 7.0% to 25.1% for various positions (For current average salary levels, see Fig. 1). And some purchasing practitioners sit on the salary sidelines, hit by a freeze or cutback.

Take a look at the cost of living figures cranked out the by U.S. Department of Labor for an indicator of your on-the-job compensation progress. The government's CPI-U (Consumer Price Index for all urban consumers) rose less than 11% in the past two years. Compare that increase to the approximately 25% pay hike that would have been required in the previous two-year period, simply to stay even with inflation gains.

Closing in on compensation

Whether you're a junior buyer or the top dog in purchasing, you can use this report to check your salary standing against the average earnings of fellow practitioners. And projected salary boosts for this year (See Fig.2) will lend a hand to purchasing executives working on budget projections.

Our salary report is based on survey responses from top purchasing executives from the 500 largest industrial companies in the United States. For firms that do not have a purchasing function at the corporate level, questionnaires were directed to the top-ranking purchasing executive at the company's largest division or subsidiary.

Current salary figures were supplied by purchasing and materials executives from 120 companies. Responses from this 24% sample provide the basis for PW's 1983 compensation update.

Performance pays

For 78.3% of the survey respondents, performance tops all other considerations when salary increases are handed out. Experience is what counts the most, say purchasing executives at 5.8% of the surveyed firms. Lower on the totem pole are seniority, education, and other factors.

"Performance—totally" makes the difference in salary reviews for purchasing staff members at Amdahl Corp., says executive William Jastrow. The director of purchasing for the Sunnyvale, CA-based firm, he says of performance indicators, "We rank quality as most important, followed by delivery and cost." A performance measurement formula is used, although staffers' responsibilities for different commodities are taken into consideration, he says.

Adds Grant T. Wagner, purchasing manager at Chicago Bridge & Iron Co., Oak Brook, IL, performance measured in terms of "the volume of work, cost of that volume, and the kind of relationships they have with suppliers" affects individual staff members' salary increases. Education also is considered.

Fig. 1—Pay levels: Highs, averages, and lows

Vice president purchasing
$150,000
$63,074 to $92,697
$35,700

Vice president materials
$217,000
$89,085 to $121,693
$49,000

Purchasing director
$172,000
$51,200 to $71,655
$20,800

Materials director
$97,000
$52,030 to $71,850
$35,700

Purchasing manager
$117,800
$36,600 to $54,578
$15,600

Materials manager
$84,000
$41,367 to $59,978
$25,000

Purchasing agent
$90,100
$30,750 to $45,075
$18,000

Senior buyer
$65,000
$27,246 to $39,396
$15,072

Buyer
$55,000
$22,186 to $32,248
$13,656

Junior buyer
$45,700
$19,298 to $27,884
$12,000

Expeditor
$43,000
$16,910 to $24,300
$13,000

Trainee
$38,100
$17,034 to $24,149
$12,000

Highest reported salary
1983 averages—low and high reported salaries
Lowest reported salary

PURCHASING SALARIES

What about education?

Asked about educational achievements that have an impact on purchasing pay, 42.5% of the survey participants cited a bachelors degree other than engineering as a factor. And an M.B.A. degree was noted by 40.0% of the group.

Other educational achievements that have a bearing on salaries are Certified Purchasing Manager (C.P.M.), mentioned by 37.5% of the sample; an engineering degree, 29.2%; masters degree other than M.B.A., 15.0%; doctorate, 3.3%; and other, 6.7%. Education has no impact on pay, according to 30.8% of the surveyed executives.

The C.P.M. designation can boost pay between 1% and 5%, say 21.7% of the survey participants. Another 10.8% see a 6-10% increase in store for the C.P.M. staffer and 2.5% cite an 11-15% gain. Also, 1.7% note more than a 15% impact.

But 38.3% of the survey respondents say that the C.P.M. standing makes no difference on purchasing salaries. "Greater emphasis should be given to recognize and compensate people who have received their C.P.M. Some companies reward individuals for obtaining an M.B.A. However I have worked with many individuals who are better qualified without an M.B.A.," says one purchasing executive.

Percentage gains

Comparison with figures reported two years ago shows that purchasing directors' average low and high reported salaries climbed 17.6% and 15.0%, respectively. At the same time, reported averages for vice presidents of purchasing rose 7.0% and 10.9%.

Meanwhile, materials directors' average reported low and high salaries increased 17.7% and 10.0%. And materials vice presidents topped the percentage gains of all other surveyed positions, with average two-year boosts of 21.2% and 25.1%, respectively.

For the same period, purchasing managers' average low and high reported pay figures moved up 15.1% and 15.2%, respectively. For materials managers, the gains amounted to 12.4% and 11.7%.

And purchasing agents' salaries during the past two years rose 15.0% at the low end of reported ranges, as they increased 16.4% at the high end. For senior buyers, the average pay gains were 18.1% and 16.7%, respectively.

Buyer pay levels rose 16.0% and 17.2%, respectively, in the two-year period. The junior buyer average pay hikes were greater, at 18.8% and 19.7%. Expeditors' average low and high salaries rose 14.4% and 11.5%, as trainees' pay increased by 15.7% and 19.1%, respectively.

Company size, location, and line of business

Bigger is better when it comes to salary levels. With few exceptions, the purchasing professional working at a larger firm draws the biggest paycheck (See Fig. 3).

Example: Average reported high salaries for purchasing managers amounted to $68,899 at companies with $4 billion and higher annual gross sales, compared to $56,446 at companies in the $1.1 billion to $3.9 billion range. And the figures drop to $49,988 for purchasing managers in companies with sales of $500.1 million to $1 billion, and to $46,134 for

Fig. 2—What's ahead for pay boosts

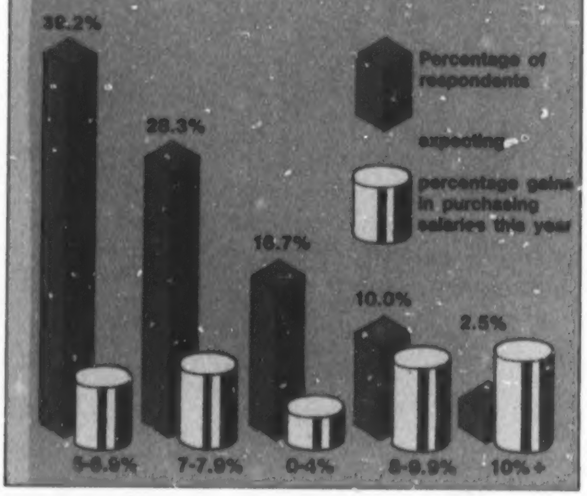
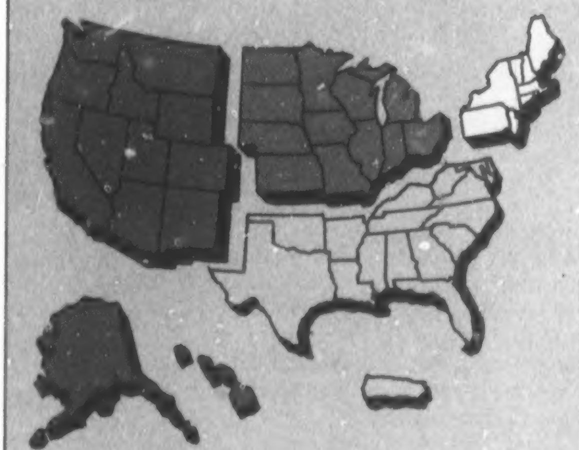


Fig. 3—Salary breakdowns by company size*

	Up to $0.5 billion	$0.5-1.0 billion	$1.0-4.0 billion	$4.0 billion and over
VP Purchasing	$47,075 $73,725	$56,726 $79,503	$64,198 $91,288	$75,997 $118,066
VP Materials	— —	$52,000 $74,500	$101,872 $130,704	$91,131 $131,559
Purchasing director	$39,785 $55,686	$52,783 $67,850	$50,478 $73,452	$64,838 $96,401
Materials director	— --	$51,750 $66,860	$51,087 $69,513	$54,289 $83,958
Purchasing manager	$31,966 $46,134	$36,040 $49,988	$36,292 $56,446	$44,488 $68,890
Materials manager	$42,967 $57,733	$33,715 $54,420	$44,002 $57,417	$39,868 $66,056
Purchasing agent	$28,425 $41,013	$29,207 $39,960	$29,312 $44,966	$39,280 $58,325
Senior buyer	$24,633 $35,153	$26,439 $37,530	$26,530 $39,531	$33,539 $47,440
Buyer	$20,244 $29,221	$21,517 $30,016	$21,653 $32,116	$27,598 $40,420
Junior buyer	$18,184 $25,926	$18,328 $25,332	$18,559 $27,745	$23,265 $34,256
Expeditor	$11,823 $17,156	$16,233 $21,556	$17,447 $25,239	$20,719 $30,808
Trainee	$13,130 $19,630	$15,661 $20,633	$16,699 $24,638	$20,102 $28,724

*Averages of reported low and high salaries

Fig. 4—Purchasing salaries and location*



	North-east	North Central	South	West
VP Purchasing	$68,426 $98,489	$62,082 $94,260	$54,600 $83,340	$56,3 $81,55
VP Materials	$86,100 $124,742	$105,087 $121,6[illegible]	— —	$84,95 $97,4[illegible]
Purchasing director	$55,677 $79,551	$48,308 $64,788	$51,481 $65,347	$49,[illegible] [illegible]
Materials director	$47,663 $72,598	$50,828 $77,953	$60,000 $60,000	$56,42 $69,61
Purchasing manager	$37,207 $55,951	$36,431 $54,082	$34,422 $48,537	$36,93 $56,31
Materials manager	$30,986 $54,669	$39,817 $60,417	$48,425 $69,300	$48,69 $55,30
Purchasing agent	$30,435 $46,744	$31,841 $45,837	$29,255 $37,193	$30,72 $45,80
Senior buyer	$28,286 $41,438	$27,247 $38,976	$25,416 $35,234	$26,42 $38,01
Buyer	$22,342 $32,736	$22,912 $33,371	$20,015 $27,572	$22,07 $32,741
Junior buyer	$18,599 $27,089	$20,217 $28,952	$18,622 $24,781	$19,7[illegible] $29,9[illegible]
Expeditor	$15,382 $22,337	$18,660 $27,981	$14,894 $20,420	[illegible] $26,8[illegible]
Trainee	$16,371 $23,700	$16,786 $23,334	$13,333 $15,767	$20,06 $29,61

* Averages of reported low and high figures in [illegible]

firms in the "up to $500 million" category.

Despite the sometimes-significant differences in average pay levels for various purchasing positions in different regions of the country, an inconsistent pattern is reflected in survey results (See Fig.4). No clear pattern emerged in line-of-business comparisons, but energy field salaries were higher in a number of instances (See Fig. 5).

Nonsalary extras

Purchasing staffers' nonsalary compensation amounts to 1-10% of total compensation, report 23.3% of the survey participants. An 11-20% range is noted by 10.0% of the group, 21-30% is reported by 7.5% of the sample, and 31% or higher figure is cited by 14.2%.

Stock options moved ahead as the most popular form of nonsalary compensation (reported by 27.5% of survey respondents). Trading places with stock options are incentive awards, noted at 21.7% of reporting firms. Other forms of nonsalary contributions are used at 18.3% of the companies, and 45.8% of the surveyed executives say that no extra compensation is provided.

How does purchasing compare?

An increasing percentage (80.8%) of purchasing executives believe that their department's salary hikes are on a par with other departments within the company, compared to the 75% reading two years ago. "Better" purchasing salaries are reported by 9.2%, and "worse" by 0.8%. "Purchasing is, after many years, finally starting to take its place," comments a top purchasing executive.

Annual raises are the order of the day at 79.2% of the surveyed firms. Only 0.8% report raises every six months, 3.3% note raises every 18 months, and other intervals are reported by 15.0%. ***PW***

Fig. 5—Comparison of salary averages by industry

		Food, tobacco, related products	Transportation	Energy
VP purchasing	Ave low	$60,878	$80,000	—
	Ave high	$94,511	$130,000	—
VP materials	Ave low	$133,050	$145,000	—
	Ave high	$168,025	$200,000	—
Purchasing director	Ave low	$53,041	$43,382	$77,875
	Ave high	$64,275	$66,265	$104,150
Materials director	Ave low	$52,500	$54,250	$57,600
	Ave high	$78,800	$52,773	$86,500
Purchasing manager	Ave low	$34,188	$36,273	$47,893
	Ave high	$49,424	$56,206	$74,950
Materials manager	Ave low	$30,600	$25,000	$48,200
	Ave high	$46,000	$23,062	$71,560
Purchasing agent	Ave low	$32,220	$26,406	$39,258
	Ave high	$44,334	$41,946	$60,184
Senior buyer	Ave low	$29,604	$29,197	$33,966
	Ave high	$40,369	$42,721	$46,586
Buyer	Ave low	$23,077	$20,829	$26,871
	Ave high	$33,049	$30,287	$39,719
Junior buyer	Ave low	$20,416	$13,757	$23,749
	Ave high	$29,619	$19,495	$35,312
Expediter	Ave low	$16,390	$21,800	$19,786
	Ave high	$22,874	$29,942	$29,730
Trainee	Ave low	$15,163	$16,606	$20,667
	Ave high	$18,620	$22,038	$33,367

Coming up: ***PW*** analyzes salary trends for purchasing practitioners in the second 500 largest U.S. industrial firms, and in a sample of smaller firms as well. A 100-page reprint featuring these articles, plus many tables not published in the magazine, will be available later this year.

Textile mill, apparel, leather	Rubber, plastics, products	Stone, clay, glass products	Instruments, related products	Fabricated metal products	Machinery, except electrical	Transportation equipment	Electric, electronic equipment	Communications, electric service	Miscellaneous
$64,380 $96,540	$67,500 $96,000	$75,000 $115,000	$50,000 $75,000	$53,250 $73,333	— —	— —	$61,353 $93,205	— —	$58,410 $75,070
— —	— —	$40,000 $120,000	— —	$79,667 $114,667	$55,000 $75,000	$90,000 $120,000	$72,688 $112,016	— —	$100,536 $131,784
$40,965 $57,955	$44,792 $70,067	$57,767 $80,333	$41,700 $62,600	$49,355 $70,906	$47,046 $69,580	$49,829 $74,056	$48,855 $73,012	— —	$53,500 $70,200
— —	$40,000 $62,000	— —	— —	$58,500 $97,000	$58,092 $86,660	$47,100 $52,953	$53,826 $80,223	— —	— —
$30,729 $45,796	$34,841 $53,763	$35,200 $52,400	$27,447 $42,347	$32,452 $47,730	$36,886 $53,360	$36,557 $54,587	$34,305 $52,613	$29,000 $49,000	$36,010 $50,407
— —	— —	— —	— —	$43,650 $55,350	$40,000 $72,000	$29,760 $25,792	$38,151 $63,139	— —	— —
$23,478 $35,230	$31,576 $47,531	$29,950 $42,650	$25,000 $37,500	$30,667 $41,333	$28,939 $39,460	$29,658 $42,658	$29,507 $43,958	$18,000 $28,000	$32,280 $42,813
$25,320 $35,480	$26,945 $40,005	$28,300 $39,950	$22,940 $34,830	$24,672 $35,540	$25,430 $36,801	$28,052 $40,098	$25,584 $37,750	— —	$25,570 $36,886
$18,573 $26,372	$24,269 $36,237	$24,350 $35,300	$17,850 $27,630	$21,380 $29,808	$20,465 $30,088	$23,456 $32,566	$21,874 $31,455	$14,000 $18,000	$20,323 $29,042
$20,000 $30,000	$21,000 $32,000	$20,000 $27,000	$16,500 $25,000	$18,921 $25,410	$17,825 $25,146	$18,561 $28,245	$15,007 $25,879	— —	$19,726 $25,744
— —	$19,210 $27,894	— —	$6,350 $8,658	$12,120 $17,960	$15,750 $22,750	$24,000 $33,592	[illegible] $19,004	— —	$15,300 $19,946
— —	— —	— —	— —	$14,763 $19,583	— —	$19,541 $27,350	$17,047 $24,536	— —	[illegible] $17,000

Market conditions to control freight costs

It's still essentially a buyers' market in freight.

That's not to say that there won't be a fair amount of rate acceleration as business continues to expand over the next year or two. But, by and large, the combination of continued strong competition and relatively moderate cost pressures should be sufficient to prevent any return to the double-digit increases of a few years back.

A look at the projections on the charts above (now being supplied by Wharton Econometrics to *PW* on a regular quarterly basis) tell the story. The big economic consulting firm, for example, sees the average freight bill rising only about 2.7% this year.

As one Wharton analyst explains it, "There is still a good amount of recession-induced overcapacity in the industry which will keep freight tags down over the nearterm in spite of increased demand. Indeed, intense competition within and between competing modes will actually keep rates from getting out of hand through the 1983-85 forecast horizon."

But some acceleration is inevitable. Next year's overall increase is estimated at around 7.7%—some five percentage points above this year's projected boost.

Here's a more detailed rundown on what Wharton expects from now through the end of 1985.

Rail

Relatively low rates of increase are seen (only 4.4% this year and 7.3% in 1984). Equally significant, carriers seem to have adjusted extremely well to deregulation, improving their service through mergers and expansion of their intermodal capabilities. As such, Wharton expects the railroads to continue to increase their share of intercity freight at the expense of the motor carriers.

Furthermore, the railroads have adjusted their rates to enable them to compete far more effectively with other modes of freight transport.

Trucking

The industry has been slow to adapt to deregulation, and carriers are having trouble coping with increased competition from the railroads, the influx of new motor carriers, and the intense rate reductions that followed.

As a result, Wharton has lowered its previously projected increase for all of 1983 to only 3.4%.

On the other hand, a more-than-doubling in the rate of increase (to 8.3%) is projected for 1984.

Barges

Shipments of two of the mode's most important commodities—grain and coal—are likely to remain depressed throughout 1983. This will exacerbate the waterway carriers' overcapacity problems which, along with lower fuel prices, will lead to a decrease in barge rates this year.

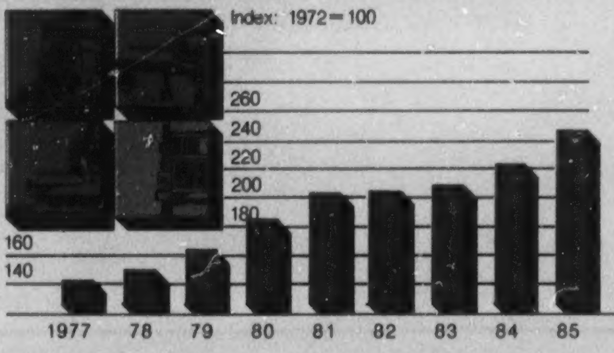
Next year, however, increased user taxes combined with higher fuel costs and a reduction in overcapacity will lead to a rate shift back into the plus column.

Air freight

Despite cost-cutting moves, carriers are making an effort to make higher prices stick in order to get out of the red. One exception: the small package shipping sector, where competition is so fierce that rates are not likely to rise at all this year.

Again, higher rate increases will occur in 1984 and 1985 owing to tightening labor markets, increasing fuel costs, and reduced overcapacity. Further upward pressure on overall rates over this longer-run period could come from strong demand increases for more expensive overnight shipping services. ***PW***

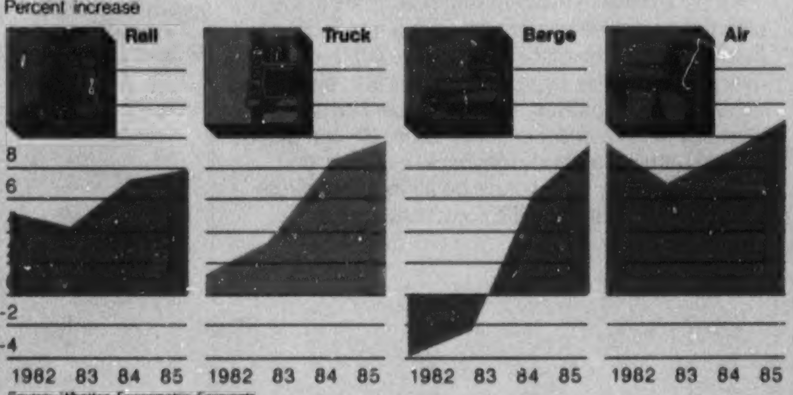
***PurchasingWorld* freight rate index**



Increase over previous year	
1977	6.4%
1978	7.9%
1979	9.4%
1980	12.7%
1981	7.6%
1982	1.5%
1983	2.7%*
1984	7.7%*
1985	9.2%*

*Estimated

Freight cost outlook by mode (Increase over previous year)



Source: Wharton Econometric Forecasts

Slight price acceleration "inevitable"

Most purchasing managers now seem resigned to some sort of price acceleration over the next 12 months.

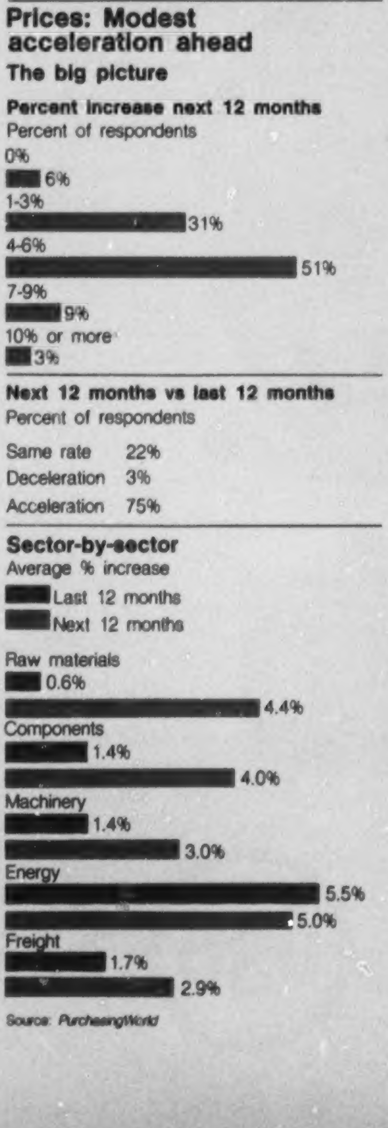
To be sure, no one sees any return to double-digit inflation rates—even in the highly volatile raw material sector. But by and large the vast majority (75% of the PMs responding to a new nationwide ***Purchasing World*** survey) expect to see procurement bills rising at a faster clip than in late 1982 and 1983.

Not only is this true for overall purchase mixes but also for almost every major product and service sector (see chart). "It's inevitable," is the way one Ohio-based PM puts it—noting that the combination of improving demand, somewhat higher operating rates, and slim vendor margins will eventually push tags up.

But he and others hasten to add that the buyer's market isn't going to completely disappear. Comment after comment, for example, suggests that most PMs expect to maintain much of their bargaining leverage—particularly where big volume orders are being negotiated.

In any event, here's a more detailed rundown on how industrial prices seem to be shaping up for the rest of the year and into early 1984.

- **Overall trend:** The average increase over the next 12 months is put in the still-comfortable 4.2% range. On the other hand, that's well above the less-than-1.5% increase noted by these same respondents over the last 12 months—and only a handful of PMs (3% to be exact) expect to better their last year's performance.
- **Basic raw materials:** The most substantial acceleration is seen here—as last year's fractional 0.6% average advance jumps up into the 4½% range.
- **Component parts:** A somewhat higher rate of increase is anticipated here, too—with the projected 4% advance comparing to only about a 1½% upward movement over the past year. Reason: Continuing poor demand for most capital goods.
- **Machinery:** Additional acceleration is expected to be minimal. The average increase, for example, is put at only 3%—not all that much above the 1½% gain of the past year. Reason: continuing poor demand for most capital goods.
- **Energy:** Actually some fractional slowdown in the rate of rise is anticipated—as last year's 5½% average gain edges to near the 5% level. Reason: expectations of stable crude oil prices and more-than-ample supplies of both natural gas and coal.


Prices: Modest acceleration ahead

The big picture

Source: PurchasingWorld

- **Freight:** Competitive pressures engendered by deregulation will continue to play a major role. As such, the average gain over the next 12 months is expected to be lower here than anywhere else (2.9% to be exact)—and again not all that much above the 1.7% average increase reported over the past year.

Many of the respondents back up their freight estimates by noting that discounts ranging upwards of 20% are not all that uncommon these days. A few add that with a little pushing they pretty much expect to hold the price line here over the next few quarters.

Nor is freight the only sector where some PMs are hopeful of maintaining the status quo as far as prices are concerned. Other areas mentioned as possible candidates include steel, castings, fasteners, bearings, corrugated boxes, MRO items, cutting tools, tungsten carbide parts, power transmission components, selected rubber products, selected chemicals, and machinery.

The same is true of energy. Indeed, a surprisingly large 15% of the respondents look for their overall fuel and power outlays to stay at current levels for another 6-12 months.

On the other hand, some buyers say that some fairly substantial hikes may be in the offing in such hard hit areas as nonferrous metals—a sector where prices nosedived in late 1982. Even so, they feel quotes here will still be hard put to reattain their prerecession highs.

The overall PM attitude is perhaps best summed up by one purchasing vice president who notes, "We may have to accept some boosts. But we'll do so only where alternate sources are not available and the vendor in question is able to supply us with complete cost justification." ***PW***

OCT/1983

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Vol. 27, No. 10 - October 1983

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6 Letters

11 *PW* Predicts
Price pressures heating up

17 Datatrak
Key economic trends 17
Current prices 19
Steel scene 22
Procurement status 24
Leadtimes 26
Spot market prices 28

32 Purchasing Law
Watch your language!

34 Negotiations
Buyer strategy leading to quality gains

39 *PW* Business Systems Data File
40 Buying office furniture—a new purchasing specialty
42 Computer confusion? Better buying is needed
44 Desktop computers data file
56 Copiers data file
63 Electronic typewriters data file
68 Facsimile equipment data file

73 Packaging buyers see stable market
The majority of respondents to a nationwide *PW* survey see this sector as basically a buyers' market, citing a combination of factors—including continued ample to more-than-ample supply, and anticipated hard-nosed bargaining on the part of PMs—as part of their cautious optimism.

77 Products*

93 Purchasing salaries: second 500 and smaller firms
PW's comprehensive survey of purchasing salaries continues, with data on purchasing compensation in the nation's second 500 largest industrials and smaller companies.

105 New projections for nonferrous supplies, demands, and prices
Here's the first in a continuing series of demand-supply-cost-price analyses prepared by Wharton Econometric Forecasting Associates. Part I covers new projections for the nonferrous sector.

120 *PW* Perspective
Analyze your values

* Metalworking issues

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PW PREDICTS

Robert S. Reichard, executive editor

Price pressures heating up

Better-than-expected productivity gains auger well for keeping a lid on inflation—at least as far as the next few months are concerned.

Increases in worker efficiency so far this year have been averaging near 5% at annual rate (private nonfarm business basis). And in the crucial manufacturing sector, the figure is even more impressive—about 8%.

To be sure, productivity always rises relatively fast during the initial stages of an upturn as companies try to raise output without substantially adding workers until they are certain the recovery will be sustained.

But this time around, the increase is more than "cyclical," suggesting that more than two decades of decline in efficiency gains may finally be coming to an end.

What makes things even more encouraging this time around is the fact that wage rates are moving up somewhat less than might be expected during a cyclical upturn. Hourly compensation so far this year, for example, has moved up at the lowest rate in 12 years, remaining pretty much in line with productivity gains. Upshot: Unit labor costs (which account for 70% of the average sales dollar) have been holding relatively steady. Indeed, most forecasts suggest that this crucial price-determining variable will rack up its best showing since 1965.

But can this kind of pattern continue indefinitely? The answer would have to be a disappointing "no." Productivity gains traditionally slow down as recovery forces industry to add more workers and eventually use their less-efficient equipment and facilities. And at the same time, slowly declining unemployment will give unions a bit more leverage at the bargaining table.

So the question is not whether prices will start to accelerate next year, but rather by how much. While all the evidence is certainly not in, rough estimates on some of the key price determinants can be made.

If you accept recent forecasts calling for a 2-3% productivity gain and a 6-7% increase in wage costs, then you wind up with about a 4% increase in unit labor costs for 1984. Then, too, it's clear that markets will be in better balance as operating rates move into the 80%-plus range—a level that should make discounts harder to come by. In addition, it would certainly be unrealistic to expect a repeat of 1983 oil declines. And the recent summer drought points to a somewhat larger food price increase than the 2-4% anticipated this year.

Throw all of this into the computer hopper, and it suggests a a 6% overall increase in the 1984 price level (GNP deflator basis).

Steel

Demand continues to lag behind earlier estimates. True, the industry is hopeful of shipping 15 million tons in the fourth quarter. Even so, that would still leave the year at only the disappointing 68-69 million ton level. Imports, meantime, continue to come up at a brisk clip, with the year's total expected to approach 16 million tons (more than 18% of the total market). Prices, too, remain subject

Fasteners

Fastener prices remain as competitive as ever. But demand could be in for some fair-sized gains in the years immediately ahead.

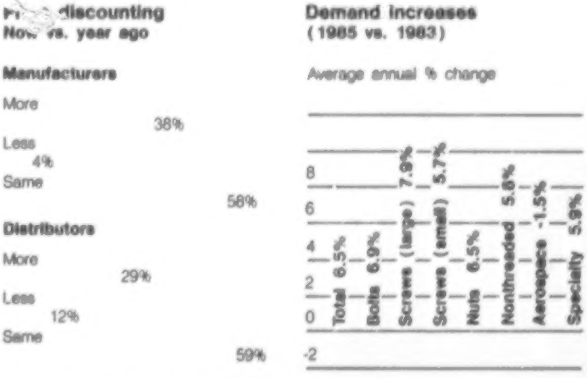
These are the conclusions of two just-released studies of this bellwether industry. Specifically:

- **On the price front,** Fastener Industry Market, in a new survey, finds that 32% of the respondents have been experiencing increased discounting during recent months—far more than the 9% who noted somewhat less shading.

The study also (1) indicates that price discounting is the number one problem on both the manufacturing and distributor levels, and (2) notes strong import competition in bolts, screws, nuts, and washers. A few respondents even put the import penetration in the high, 50-100% range.

- **On the demand front,** a new Frost and Sullivan report is basically optimistic—projecting a better-than-6% average annual gain over the 1983-1985 period and above 5% over the longer 1983-1987 span. A 7.5% average annual gain is expected for adhesive fasteners over the next four years.

Fastener market trends



Source: Fastener Industry News, Frost & Sullivan

PW PREDICTS

Zinc

CURRENT SITUATION: The alloying and plating metal is riding high—with some 6¢/lb (or 15%) added onto the going price since early summer. Discounts on merchant material have also disappeared. Indeed, spot tags are now often above producer levels. Other signs of the metal's stength: the month-ahead soldout position of some suppliers, extremely low U.S. producer inventories, buying by the Chinese, and recent price hikes in Europe.

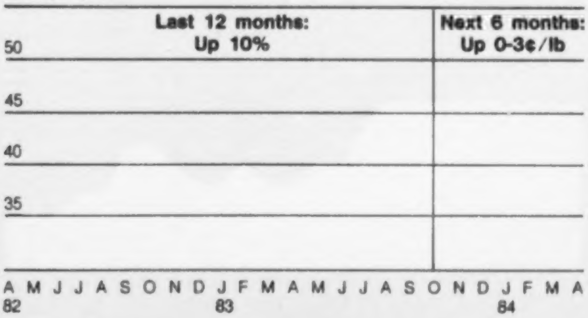
DEMAND: Given year-to-date momentum, **all signs point to 1983 U.S. slab zinc sales of near 875,000 tons—more than 100,000 tons above last year's diappointing level.** Biggest gains are in SHG, which has benefited from both a good auto year and the recent U.S. mint tender. And the bullishness is expected to spill over into 1984. For the long term, **the industry is talking in terms of a rise into the 1.1-1.2 million-ton range by 1985.**

SUPPLY: The gluts of late 1981 and 1982 have all but disappeared. Free World inventories now total only 690,000 metric tons—the lowest level in about a decade. And so far this year, Free World demand has exceeded supply by over 100,000 tons. One longterm worry: increasing dependence on overseas metal. U.S. potential has dropped to only around 300,000 tons—roughly one-third of current consumption. **On the other hand, there's little danger of any global shortage.**

PRICE OUTLOOK: Producers are now firmly in the black. But they may well opt for another price hike if demand continues strong—if only to offset some of their losses on co-metal lead. **On the other hand, increased production should temper these advances**—holding them to just a few cents over the next six months. As for the metal zooming above its 50¢/lb peak of early 1981, that may have to wait until sometime next year.

Zinc

Cents per pound



to discounting—with a recent 7% boost on sheet and strip washing out. Also, big-volume users still say they can get discounts approaching $100/ton.

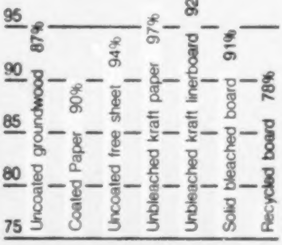
Aluminum

Sellers are now firmly in the saddle—with discounts all but eliminated on both ingot and fabricated product levels. Other indications of the strong firming trend: (1) New list hikes in producer ingot and fabricated products, (2) equally substantial increases in spot markets, (3) gradually rising U.S. operating rates and, (4) sharply declining inventories. On the latter score, global stocks have dropped off a hefty 20% over the past 12 months. The major reason for this has been a sharp increase in producer shipments which are now expected to reach 6.6 million short tons in 1983—up some 12% from last year's disappointing levels.

Paper and paperboard

Markets are now in a slowly firming trend as demand improves and operating rates creep up. On the latter score, almost all the major categories surveyed by ***Purchasing World*** have moved into the 90%-or-higher range. As for prices, linerboard producers are making another bid to boost quotes into the $290-300/ton range—with the final price likely to settle at the lower figure. Uncoated white paper is also strengthening—with discounts disappearing and new attempts being made to boost prices 5-6% in some grades.

Paper and board operating rates
(Est. 1983 avg.)



Electronic office equipment

Prices continue to come down. Xerox, for example, has slashed quotes 19% on its No. 868 Information Processing Systems. And IBM has cut tags 13-14% on its most powerful general purpose business computer—a move that should spark retaliation by competitors. A price battle also seems to be shaping up for the more powerful second generation of home computers—many of which will hit the market over the next few months. Electronic typewriters, too, are coming down—with cuts as high as 20% reported.

Copper

Still no substantial price recovery. The big problems: (1) too much new mine production (overseas producers are operating in the high 90% range) and (2) less-than-expected demand gains. True, buying by the housing and auto industries is up substantially. But this accounts for less than 30% of U.S. total chewup. In any case, ordering from the capital goods sector (which in good years accounts for as much as half the metal's overall use) continues to disappoint.

Given all this, inventories both on the producer and exchange levels remain at uncomfortably high levels—putting a lid on prices, with quotes expected to continue straddling the 80¢/lb level through yearend.

ABS plastics

Brace for another 12¢/lb advance—over and above the midyear 5¢/lb increase—and enough to bring the going tab on the high-impact pipe grade to 78¢/lb. While the increases are steep in percentage terms, they are not all that out of line with recent advances in polyvinyl chloride (ABS's chief competitor in the big pipe market). PVC, for example, has gone up more than 20% since the beginning of the year. Another upward-tagging factor: ABS resin demand is now running close to 30% ahead of yearago levels.

Stainless steel

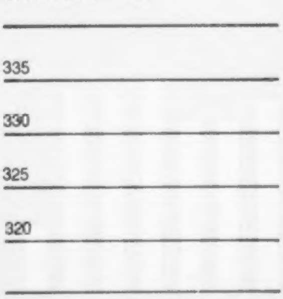
Attempts to boost sheet and strip prices 5% are failing—as several large producers decline to go along. The move would have added upwards of $100/ton onto the going price. Indeed, it now looks as though tags will remain at current bargain-basement levels through yearend—with common grades of Type 304 sheet commanding only $1,726/ton.

Behind producer reticence to raise prices: still disappointing demand—with the 11% gain in shipments so far this year not deemed sufficient to support higher quotes.

Bearings

The price erosion of the past year is being reversed—with overall averages now showing their first gains since early last year. Moreover, with demand from the auto and other industries beginning to improve, further price boosting attempts seem almost certain—though competitive pressures will keep them within bounds. Nevertheless, quotes for 1984 (on average) are likely to run as much as 7% above depressed 1983 levels.

Bearings prices
Index: 1967=100

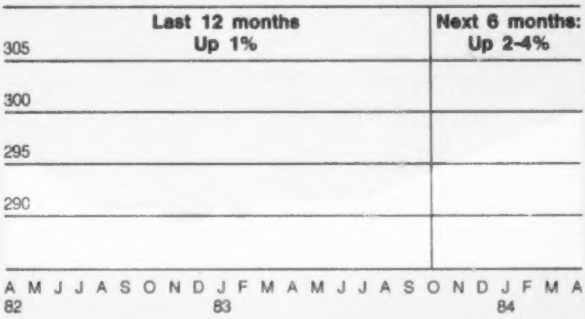


Petrochemicals

Count on paying 1-2¢/lb more for ethylene—bringing the going transaction price into the 21½-22¢/lb range. Several of the chemical's derivatives—in-

Chemicals

Chemicals
Index: 1967=100



CURRENT SITUATION: **This close-to-$70 billion industry is well on the way to recovery,** if recent production (running better than 8% ahead of late 1982) is any indication. Prices, too, have begun to pick up after more than a year of cut-throat competition. True, the price advance, overall, is small (only about 1-2%). **But the boosts in some previously hard-hit areas are fairly substantial**—especially those on ethylene, vinyl chloride, phthalic anhydride, vinyl acetate, phenol, chlorine, and most of the commodity plastics.

DEMAND: **Current gains should continue through the fourth quarter and into early 1984**—though the rate of increase should slacken off in line with the expected slower overall GNP growth rate. **Best bet for the next two quarters: About a 5% annual rate of growth in chemical areas**—somewhat in excess of the 4% GNP pace anticipated over the same period.

SUPPLY: **No real problems here**—though some spotty tightness in specific products can't be ruled out. Most reassuring, for example, is the industry operating rate—with the Federal Reserve Board putting the overall level at only near 70%. Even with continued growth, **the industry should be hard put to reach the 80% level next year.** Also suggesting ample supplies are new capacity additions of about 1% this year and 3% through 1986.

PRICE OUTLOOK: **Increases will generally be quite modest**—reflecting both the adequate capacity situation and recent cost-cutting moves. Best bet: a slow price upcreep of 2-4% over the next six months and about 4-6% for the next 12-months. **Hotly competitive industrial chemicals, however, will lag this average.** And even growth-oriented plastic resins won't rise all that fast (only a 6% increase over the next four quarters).

cluding ethylene oxide, ethylene glycol, ethanolamines, and high-density polyethylene—are also going up. Other petrochemicals scheduled for fourth-quarter advances include vinyl chloride monomer (3¢/lb), butadiene (1¢/lb), styrene monomer (2½¢/lb), and benzene (5¢/gallon).

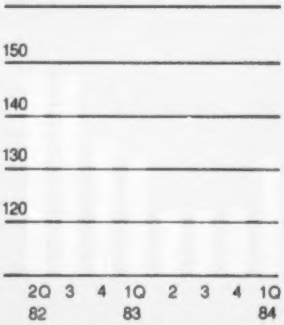
Sulphur

The price decline of the past year (see chart) finally seems to be bottoming out. In fact, there's now talk of attempts to eliminate the $10/long ton discount which has been prevailing in the big Tampa market over the past few months.

Behind the expected firming: the liklihood of sharply increased demand for fertilizers next spring. Also suggesting a modest increase (probably around yearend) are the very low production levels of Frasch producers.

On the other hand, recovered sulphur ouput continues to increase—so any bounceback to the $147.50/ton quote of early 1982 is still nowhere in sight.

Sulphur prices
$/long ton f.o.b. Tampa



Lead

Weakness is still the order of the day. True, the seasonal pickup in battery demand is beginning to have some impact. But as of now, this doesn't seem to be nearly strong enough to make for any significant market firming in view of extremly high U.S. producer and LME stocks.

And the strength in sister metal zinc could well aggravate the situation, since it could make for expanded production, bringing still more co-product lead onto the already glutted market. Upshot: little chance of any nearterm price firming. Indeed, even by early 1984, the metal will be hard put to move back into the low-20s range.

Petroleum products

Cooler weather and the end of the summer driving season point to lower gasoline tags. Best bet here: about a 3¢/gal decline—bringing the yearend average U.S. quote to near $1.22/gal. But residual oil tags should move up—propelled by the business upturn and fuel switching from natural gas. The boost here should be temporary—with higher production bringing resid back down by spring.

Plant and equipment

Average captial investment tabs should be running under last year's levels. The Commerce Department, for example, suggests that overall capital procurement costs could be off about 1% this year (versus last year's 4% increase).

And even this doesn't tell the whole story—since Uncle Sam doesn't always pick up all the unofficial discounting. Talks with PMs, for example, indicate a somewhat larger 2-4% decline for the current year—with some of the biggest declines centered in metalworking machinery. ***PW***

General price trends

The price outlook into 1985
(Percent change, first-quarter, year to year)

	84/83	85/84
Special groupings		
Processed fuels & lubricants	2.8%	7.3%
Supplies for manufacturing	3.7%	7.6%
Railroad freight	3.1%	7.8%
Materials & components		
Miscellaneous chemicals	0.2%	8.1%
Diesel (comm'l)	−7.2%	7.3%
Gray iron foundries	4.6%	7.0%
Wire & cable	9.5%	8.1%
Aluminum extrusions	9.7%	8.6%
Containers	4.0%	5.7%
Soda ash	9.7%	12.0%
Truck tires	1.3%	8.4%
Bearings	1.5%	12.1%
Plastic construction products	0.6%	5.4%
Concrete products	3.9%	8.3%
Steel structural shapes (hr)	4.5%	9.9%
Plumbing fixtures	7.1%	7.7%
Fasteners	−0.6%	8.0%
Transistors	−0.2%	3.0%
Flat glass	1.5%	4.2%
Copper cathode (foreign)	14.3%	10.4%
Equipment		
Mining machinery	2.3%	6.8%
Construction machinery	3.8%	7.4%
General purpose equipment	3.6%	8.9%
Motors and generators	5.0%	8.8%
Air conditioning & refrigeration	6.4%	9.3%

Note: Selected from more than 200 wage and price forecasts.
Source: Data Resources, Inc., Cost Forecasting Service

Industrial price increases should begin to accelerate.

But the boosts (based on Data Resources Inc. latest quarterly computer-based projections) will, for the most part, remain in the tolerable range. Next year, for example, the big econometric consulting firm sees about a 5% overall increase—fairly modest given the demand gains projected over the same period (7.4% for industrial production and 4.7% for real GNP).

And the situation over the following year (1985) doesn't look all that bad either—with DRI forecasting only about a 6% increase in overall industrial quotes at that time.

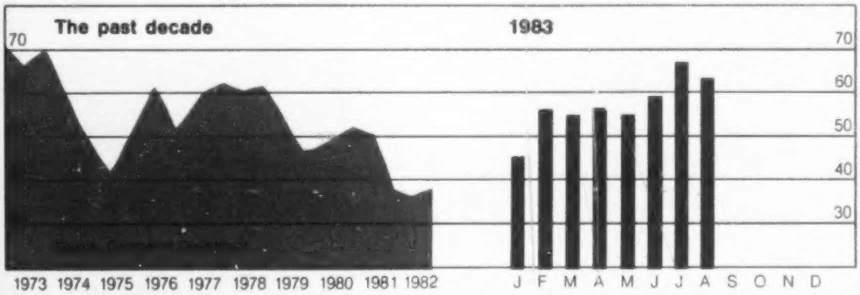
Also on an optimistic note: The above projections are below those given three months ago (*PW*, 7/83) when these same prices were expected to rise 6% in 1984 and 7% in 1985.

The news is equally encouraging on the GNP deflator and cost-of-living fronts. Rates of increase for the former are put at 4.2% and 4.6% for 1984 and 1985, respectively. Cost-of-living hikes over the same two years are also put in the 4½% range.

BUSINESS DATATRAK

NAPM business barometer

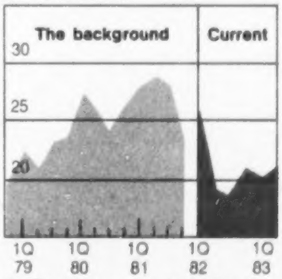
Based on five indicators (employment, inventories, new orders, production, vendor performance)



Leading indicators

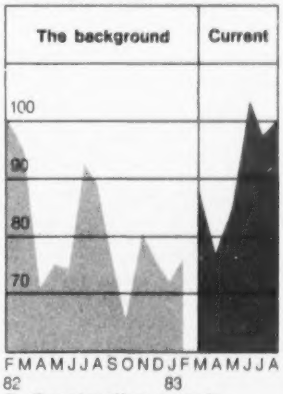
1. Capital appropriations

Billions of dollars



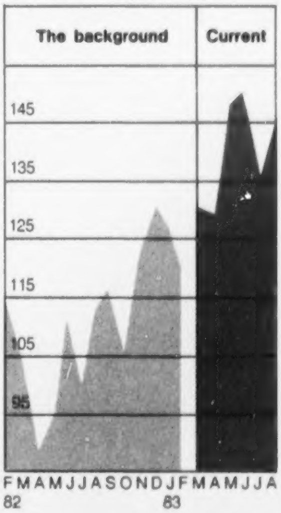
2. Consumer buying plans

Index: 1969-70 = 100



3. Construction awards

Index: 1967 = 100, seas. adj.



KEY ECONOMIC TRENDS

Solid growth seems assured

More and more signs point to a modest deceleration in the overall business growth rate.

Deceleration, however, is not the same thing as decline. Point to keep in mind: All the major barometers are still solidly in the plus column—and, even more important, show every indication of remaining there for at least another few quarters.

The NAPM Business Barometer (chart above), for example, is registering 63.6 at latest report. While a bit under the 67.1 peak of the previous month, that's still comfortably above the neutral "50" mark when negative and positive factors just about balance each other out.

And the same is true of Uncle Sam's index of leading indicators—with this yardstick continuing to rise (albeit at a diminshed rate) for the 11th consecutive month.

Actually, most business analysts regard deceleration in the rate of rise as a good omen—pointing out that the recent (second quarter) 8½% jump in real GNP at annual rate was not sustainable. In fact, they are quite comfortable with fourth-quarter 1983 and first-half 1984 projections which call for modest 4-5% gains at annual rate.

Leading indicators

Their basic bullishness is also backed up by some of the recent developments in key areas of the economy. For one, it's becoming increasingly apparent that talk of a new interest rate runup has been blown out of all proportion. Equally encouraging are the relatively lean inventory positions reported by most producers (story next page).

Even capital spending seems to be looking better these days—with a near-4% increase reported in plant and equipment appropriations (a lead indicator of actual outlays). Then, too, the backlog of unspent appropriations has bottomed out—rising for the first time in nearly two years.

Projections for actual capital spending have taken a turn for the better, too. True, totals for the year as a whole will still be down. But the fourth-quarter figures in real terms are expected to be 9% higher than a year ago.

Consumer spending also remains quite buoyant, with buying plans now on a relatively high plateau for the third month running. And the public seems to be putting its money where its mouth is. Auto sales in August ran 17% ahead of yearago levels.

One factor here could be the slowly improving job situation. More forecasts point to only about a 9.0% unemployment rate by yearend—about one half a percentage point under recent levels and nearly two percentage points under the 10.8% peak hit back in last December.

Also on the positive side is the outlook for construction awards (a lead indicator of actual building outlays). True, earlier summer interest rate hikes have made for some modest dips. But with (1) the economy continuing to improve and (2) the interest rate rise arrested, dollar outlays for the year as a whole should be up by close to 20%—about 4-5% more than seemed likely just a few short months ago.

One disappointment

Indeed, about the only disappointing news these days is on the international trade front. Right now, it looks like the red-ink figure for 1983 could well come to near $60 billion—enough to have a sizeable negative impact on such key industries as steel, automobiles, textiles, and machinery.

Lean stocks are good sign

Industrial buyers' inventories are probably in the best shape since the beginning of the 1981-1982 recession. In fact, it's questionable whether stocks can be tightened any further given (1) projections for continued output and sales gains and (2) the liklihood of some modest stretchouts in leadtimes.

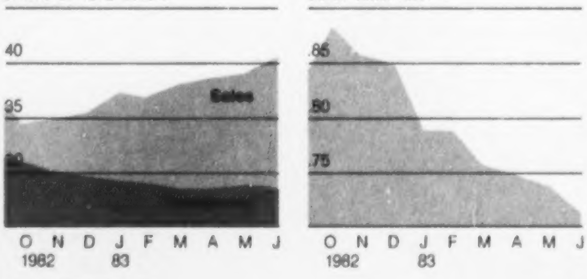
Credit the new "lean" look to a combination of recent increases in demand and some outright declines in actual physical stocks. In the key durable goods sector, for example, sales have risen better than 10% over the 9-month period ending mid-1983—all at a time when inventories have fallen off by about 6% (see chart for details).

The end result has been a sharp decline in months' supply—as measured by the inventory/sales ratio. Over this 9-month period the months' supply of purchased durable materials has tumbled from 0.84 down to 0.71—one of the sharpest such drops in several decades.

If nothing else, this bodes well for the near-term production trend.

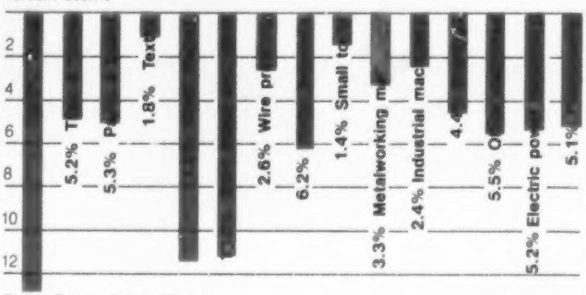
In fact, most econometric forecast models are now pointing to some fair-sized accumulation—at least as far as overall business inventories are concerned. Chase Econometrics and Wharton both put overall fourth-quarter 1983 accumulation in the $6.0-6.5 billion range (in 1972 dollars on a seasonally adjusted annual basis)—in marked contrast to the actual $15.4 billion and $4.0 billion drawdowns reported during the first and second quarters of the year.

Durable goods purchased materials inventories (real terms)



Source: Commerce Dept.

Import price declines
(Now vs. year ago)



Source: Bureau of Labor Statistics

Import prices level off

Import prices seem to be stabilizing—after more than a year of slow, steady decline.

Behind the levelling off: (1) the absence of any further appreciation of the dollar vis a vis other foreign currencies and (2) better demand for these imported products—both in home markets and in the U.S.

One exception to the levelling: fuels and related products, where a further 2.4% dropoff was reported during the latest available three-month period.

Offsetting this, however, was a 0.8% increase in overall machinery and transportation equipment during the latest (second quarter 1983) period. Within this group, quotes on road vehicles and electric machinery rose 0.4% and 1.9%, respectively—accompanied by moderate increases in telecommunications equipment and specialized machinery.

On the other hand, tags on metalworking machinery, office machines, and ADP equipment declined over the latest quarter—following strong increases during the previous three-month period.

A mixed picture—but with the overall average up—was also noted in intermediate manufactured products. Quotes moved up strongly in nonferrous metal and nonmetallic mineral manufacturing.

But imported iron and steel prices continued to fall—bringing the decreases here for the past year to over 10%. Prices were also down for miscellaneous metal manufacturing, rubber manufacturing, and leather.

Despite all these changes, most key industrial product lines remained significantly under yearago levels. The actual percentage declines are spelled out in the accompanying chart.

CURRENT PRICES

Industrial averages up slightly

The third quarter is ending on a positive note—with industrial prices (as measured by the Labor Department's producer price yardstick) moving up only 0.3% over the latest 30-day period—less than 4% at annual rate.

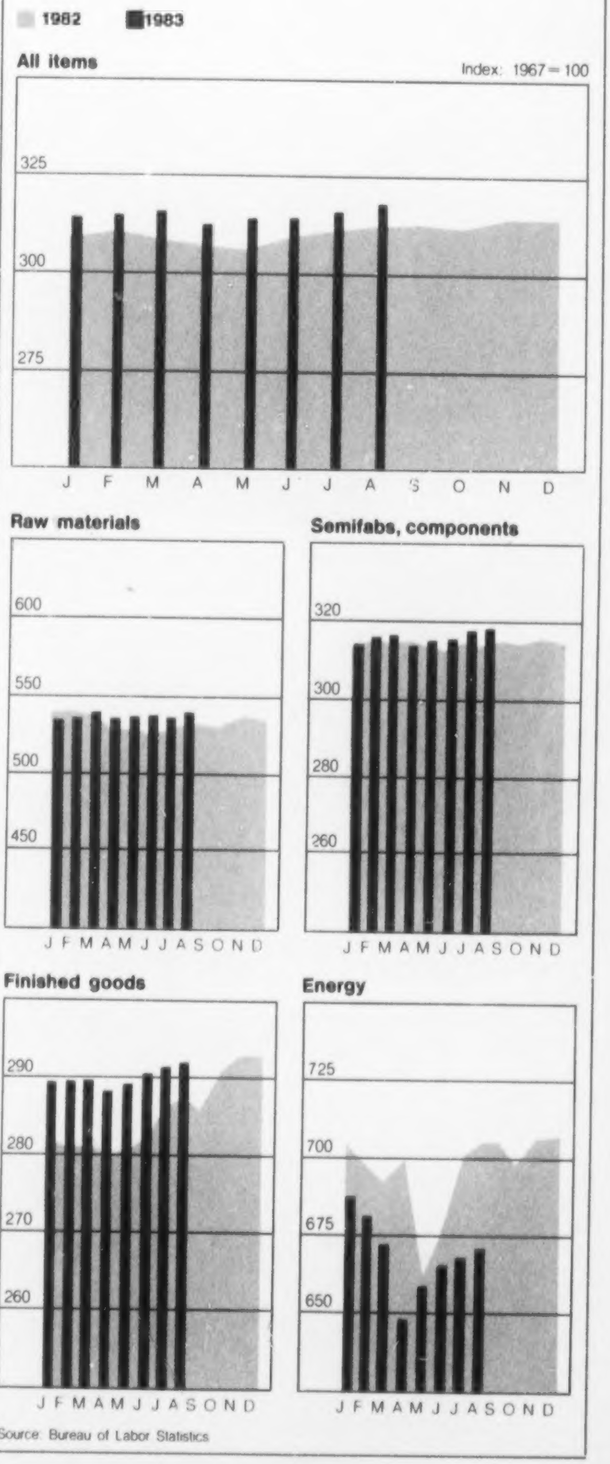
However, some fairly significant increases were posted in the chemical sector where inorganics and organics averages moved up 8.4% and 0.7%, respectively. Related plastic resins also showed a relatively large 1.2% monthly jump.

Capital equipment tags, too, sported a larger-than-average 0.7% advance. But this could well be an aberration since another government report (this one from the Commerce Department) suggests that

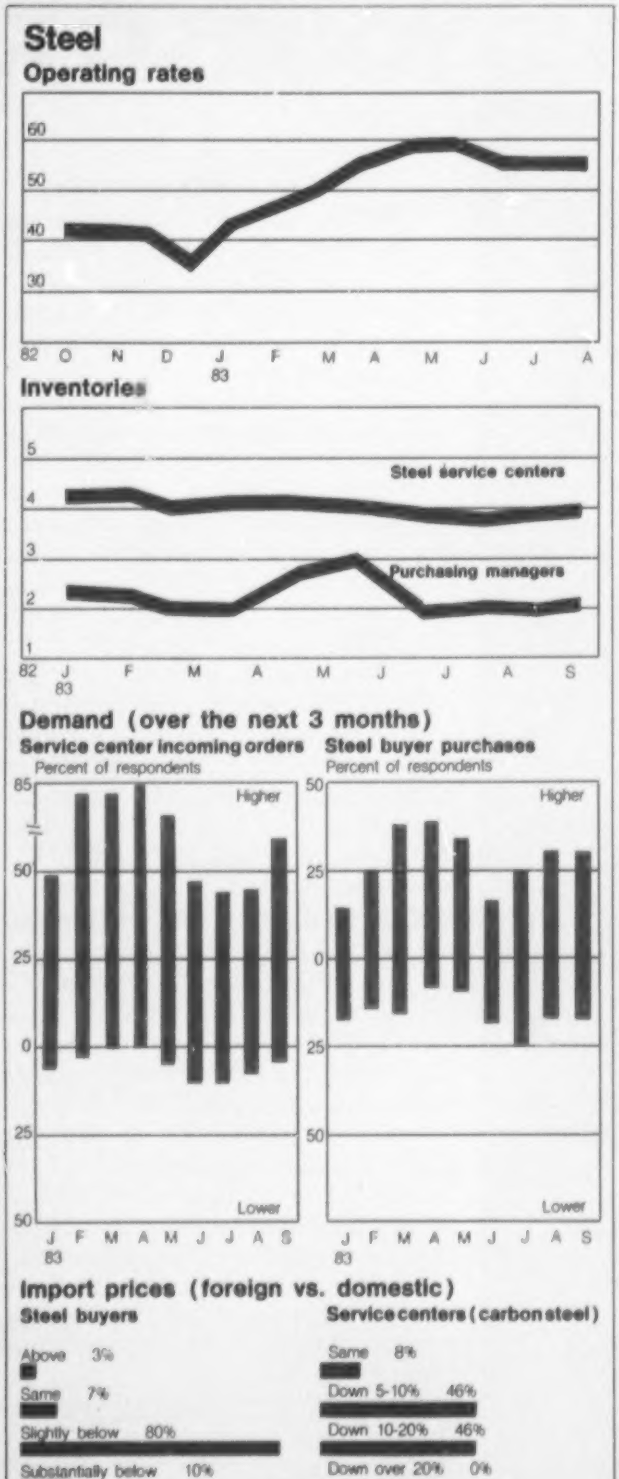
This month's breakdown

	Latest level (August)	% change from: Month ago	Year ago
Bearings	330.9	0.0	-1.3
Bolts, nuts, etc.	265.5	-0.3	-1.6
Chemicals, inorganic	292.8	8.4	-6.4
Chemicals, organic	375.5	0.7	2.6
Concrete products	302.3	0.0	1.1
Corrugated cartons	242.4	0.6	0.6
Cutting tools, small	277.0	-0.9	0.2
Electrical instruments	274.3	0.5	9.4
Electric lamps (bulbs)	313.6	0.1	9.2
Electronic components	185.4	0.1	5.6
Fans and blowers	337.0	0.0	0.7
Foundry and forge products	350.6	-0.1	1.8
Fuel oil (residual)	1151.5	2.6	-7.9
Furniture, commercial	287.2	-0.2	3.3
Gasoline	626.3	0.8	-9.7
Glass, flat	229.7	0.0	3.9
Glass containers	351.3	-0.1	-1.9
Gypsum products	289.2	4.8	13.9
Hand tools	345.4	0.0	-0.2
Hand tools, power driven	220.3	-0.9	-1.0
Industrial furnaces	362.4	0.2	2.1
Integrating and measuring instruments	223.6	-0.1	5.5
Internal combustion engines	341.6	0.1	2.6
Lubricating oil	776.0	0.0	-12.6
Lumber millwork	307.7	3.9	9.8
Material handling equipment	285.1	0.1	-0.2
Metal containers	338.0	0.2	2.8
Metal mill shapes (nonferrous)	311.8	0.5	5.2
Metal tanks	306.3	0.0	-1.6
Motors and generators	333.7	0.9	7.9
Motor trucks (10,000 lb and under)	313.6	0.0	3.5
Office and store equipment	154.7	0.1	1.5
Paperboard	250.4	0.4	-2.0
Paper boxes and shipping containers	248.1	0.1	-0.2
Paper office supplies	226.8	0.0	0.1
Paint	265.7	0.0	0.4
Plastic resins	294.1	1.2	4.2
Precision measuring tools	245.5	0.0	2.6
Pumps and compressors	345.3	-0.7	-0.7
Refractories	339.9	0.4	-0.2
Rubber belts and belting	328.5	-0.6	3.2
Scales and balances	228.6	0.0	0.7
Steel products	348.4	0.4	0.5
Switchgear	269.7	0.8	2.2
Textiles, synthetic fibers	158.4	-0.4	-2.3
Textiles, gray fabrics	146.6	0.4	1.4
Tires and tubes	242.4	-0.1	-6.0
Transformers and power regulators	223.4	-0.3	-0.5
Welding equipment	272.7	0.0	-2.1
Wire and cable	204.4	0.0	1.4

Industrial prices at a glance



Source: Bureau of Labor Statistics



Steel

Operating rates

Inventories

Demand (over the next 3 months)

Service center incoming orders

Percent of respondents

Steel buyer purchases

Percent of respondents

Import prices (foreign vs. domestic)

Steel buyers

Service centers (carbon steel)

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

the average plant and equipment tab could actually be off fractionally for 1983 as a whole.

On a more encouraging note was the still sizeable scattering of declines. More than 10 of the 50 or so product lines regularly monitored by ***PW*** (see table) actually experienced some price slippage over the past month. Add in the 15 or so that showed no change—and it means that about half of all the items managed to escape hikes.

But perhaps the best indication that inflation is still under wraps comes from the grassroots raw material and semi-fabricated price subgroups. While both are certainly moving up, the increases are pretty much in line with the all-industrials trend—thus suggesting that material cost pressures on finished goods prices are still basically under control.

STEEL SCENE

Outlook is encouraging

Buyers and distributors are now pretty much in agreement on the nearterm steel outlook. In a nutshell:

- Demand is expected to continue climbing, sparked by better-than-expected auto and construction buying.
- Inventories are in pretty good shape—though some further modest paring is still possible.
- Scattered tightness has started to appear in some steel sheet areas.
- Imports are still coming in at bargain-basement price levels.

On the latter score, for example, some 52% of the respondents to a new Steel Service Center Institute (SSCI) survey say foreign mills are offering carbon steel products under comparable domestic levels—with 46% putting the price advantage in the significant 10-20% range.

Distributors tell much the same story for stainless—with a similar 91% noting lower prices on imports, and 38% putting the break in the 10-20% range.

All this is also confirmed by the latest steel buyers survey. The comparable figures here for all types of steel: 80% are experiencing some modest price advantage for incoming shipments, and an additional 10% dub the advantage as "substantial."

What's more, all these bargains are likely to continue—if replies to expected import dependency over the next six months are any indication.

Rising demand

But whether the steel comes from overseas or domestic sources, both groups of respondents agree that the current demand pickup will continue. Specifically, nearly two out of every three service centers expect an increase in incoming orders over the next three months. That's the largest such reading in four months—and far outweighs the miniscule 5% who feel business could edge lower this fall.

Expressing the overall sentiment of the group, SSCI president, Andrew

G. Sharkey, says a 15-20% overall gain for service centers is now possible—significantly above the 10%-or-so increase originally forecast.

Even the normally more cautious steel-buying PMs are fairly bullish on the nearterm outlook. A substantial 28% of those queried expect to increase their intake of the metal over the upcoming quarter—well above the 19% who feel that they might have to cut back a bit on incoming shipments.

And if further assurances on the demand side are needed, one only need look at some of the industry forecasts making the rounds. Armco Steel, in its latest quarterly projection, puts fourth-quarter mill shipments near 15.4 million tons, well above the 17.1-million-ton third quarter figures. Armco also sees 1984 coming in at 77.7 million tons—some 9 million above estimated 1983 totals.

Inventories

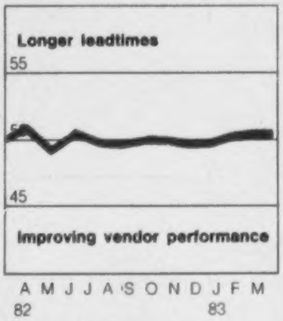
Finally, as noted earlier, both buyers and distributors say inventories are in good shape (see chart for details). And they could edge even lower—as both groups indicate they'll be attempting further cutbacks in the months immediately ahead.

On the other hand, such paring could prove difficult—given the already low levels. Steel-analyst Peter Marcus of Paine Webber, for example, estimates that user inventories have dropped down to only 9.5 million tons. That's only a six weeks' supply—less than half the 12.5-week peak hit in mid-1979.

Monthly procurement status report

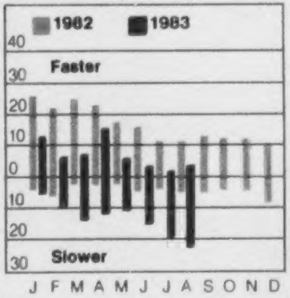
Leadtime index

A 'diffusion' index based on 158 key commodities. Above '50' indicates a tendency for leadtimes to stretch out. Below '50' suggests improving vendor performance.

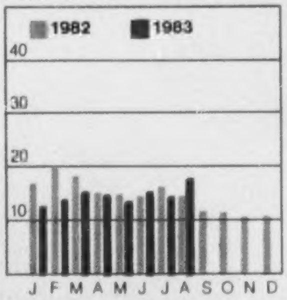


Delivery performance

Percent reporting deliveries

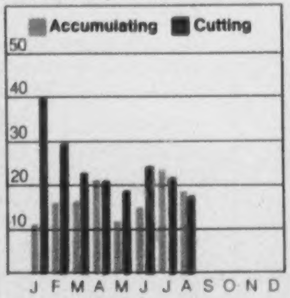


Forward commitments



Inventory strategy

Percent of respondents



Source: NAPM

PROCUREMENT STATUS

No real leadtime problems—yet

The first faint signs of a modest tightening are becoming apparent. It's not so much that the capacity isn't there (the average factory utilization rate is still well under preferred levls), but rather, that some vendors have apparently underestimated the speed of the recovery.

In any event, there have been reports of scattered stretchouts in flat-rolled steel products, castings, and electronic components. Also worth noting is the small uptick in ***PW***'s exclusive leadtime index.

To be sure, the index's 51 reading (just one point above the "neutral" 50 level) is not all that earthshaking. But the fact that readings have held at this level for four consecutive months does seem to suggest that things aren't quite as easy as they were back in early 1983 when the economy first began to revive.

A firming market is also verified by the NAPM speed-of-delivery indicator. Some 22% of surveyed buyers now report slower performance—far more than the small 4% who say they are still receiving shipments faster than promised.

Another reassuring note: Most PMs responding to ***PW***'s latest procurement survey say that any difficulties are far less than were experienced during the initial stages of earlier recoveries.

This lack of any really serious concern also shows up in overall inventory strategies. Last month, for example, buyers adding to stocks were almost completely offset by others who were still paring. This has to be regarded as significant in view of the recent boosts in production schedules reported by these same PMs. ***PW***

Leadtimes and availability

Chicago: Component part leads are out slightly. Ditto, batteries (18-20 weeks), moss semiconductors (16-24), caustic soda (1-1½), aluminum sheet (12-16), brass and copper sheet (6-7), and copper rod (4-5). But coming in are softwood plywood (1-2), and integrated circuits (14-24). Steel remains unchanged.

Cleveland: Coil coating paint is out fractionally (to 4 weeks). Ditto, cold-finished aluminum (to 10-12). Basically unchanged are corrugated cartons (3), folding boxes (4), 2-ply fiber drums (2), steel canisters (6), polyethylene and PVC (2-3), alloying materials (on demand), and greaseproof papers (4-5).

Los Angeles: Several heavy-duty items are out, with these new leads (in weeks): aluminum sheet (17-26), aluminum pipe (17-26), valves (26-41), and electric cable (26). Semiconductors, printed circuit boards, and computer peripherals are out substantially. But coming in are galvanized steel (5-6), insulated material (8-9), pumps (4-5).

BUSINESS DATATRAK

Houston: Reduced demand has pushed leads for field-fabricated pressure vessels lower (into the 8-12 month range). Little change elsewhere, with these typical weekly waits: component parts (4-8), MRO items (2-4), carbon steel valves (9-35), packaging (2-4), mill steel (4-8), and service center steel (1-2).

Philadelphia: Carbon steel round coil is out to 4-5 weeks. Other steel lines are unchanged. Ditto, standard fasteners (stock to 4), standard bearings (2-3), standard valves (5-8), plastic sheet (6-8), linear ICs (10-12), lube oils (1 week or less), steel strapping (1-1½), and poly bags (1-2).

Pittsburgh: Waits on tin shipments under 5000 lb are now only 1 week. Other current leads: copper mill products (6), maintenance paint (5), polyethylene and PVC resins (4), steel strapping (2-3), painted seals (6-8), lumber (3-4), laminated paper (3-7), steel drums (1), corrugated (2-3), and multiwall bags (6).

Leadtimes (in weeks)

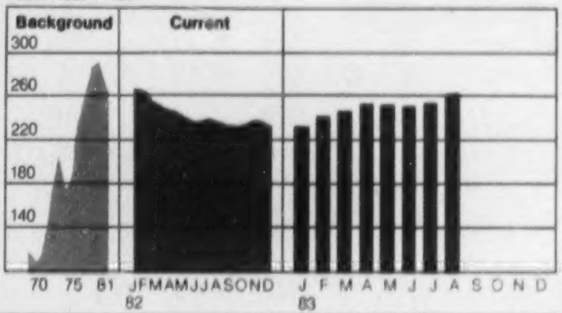
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	7	7	5
C-R Sheet (Chgo)	10	10	13
Plate (Phil)	4½	4½	4½
Plate (Chgo)	2½	2½	2
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	4½	4½	5
H-R Bars (Chgo)	2½	2½	2
Cold-Drawn Bars (Phil)	4½	4½	6
Galvanized (LA)	5½	6	4
Galvanized (Chgo)	7	7	9
Structurals (Chgo)	2½	2½	2
Structurals (Hous)	17	17	17
Tubing (Phil)	6	6	19
Grey Iron Castings(LA)	8½	12	12
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	7	7	7
Pipe, Carbon (Hous)	13	13	20
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	13	13	13
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	8	8	8
ICs (Linear) (Phil)	11	11	11
Motors (Phil)	21	21	21
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	7	7	7
Relays (Chgo)	15	15	15
Resistors (Chgo)	10	10	10
Resistors, Wirebound (Phil)	10	10	10
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	3½	3½	3½
Plywood (Chgo)	2	2	2
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	3	3	3
Softwood (Phil)	1/5	1/5	1/5
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	3
Paint, Coil Coating (Pgh)	4	4	3
Paint, Maint. (Clev)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Clev)	2½	2½	2
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2½	2	2
PVC Resin (Pgh)	4	4	4
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	4
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	4½
Cartons, Corrugated (Clev)	3	3	3
Cartons, Corrugated (Hous)	3	3	3
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	4½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	4	4	5
Shrink Film (Clev)	3	3	3
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	2½	2½	2½
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	1	1	1
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NON-FERROUS			
Aluminum Coil (Chgo)	11	11	9
Aluminum Plate (Chgo)	9	9	9
Aluminum Sheet (LA)	4½	6	5½
Aluminum Sheet (Chgo)	14	11	9
Brass Castings (LA)	8½	8½	8½
Brass Rods (Chgo)	3½	3½	2½
Brass Sheet (Chgo)	6½	5	5
Brass Tube (Chgo)	6½	6½	9
Copper Fittings (LA)	5½	5½	4½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	6½	6	4½
Copper Tube (Phil)	6	6	6
Lead (Pgh)	2	2	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	3	3	3
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	2	2	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	12	12	22
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	52	52	56
Compressors, Reciproc. (Hous)	39	39	45
Fasteners (Chgo)	½	½	½
Fasteners (LA)	4	4	8
Fasteners, Std. (Phil)	2	3½	3½
Heat Exchangers, Carbon-alloy Steel (Hous)	20	20	30
Heat Exchangers, Hi-pressure (Hous)	21	21	43
Insulation Mat'l. (LA)	8½	9½	9
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1
Pumps (Hous)	41	41	41
Pumps (LA)	4½	9	9
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	6	6
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	8	8	13
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month	263.3
Month before	256.0
Year ago	236.2

Index: 1967 = 100



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	347.00	347.00	347.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	24.40	24.40	24.40
Steel, bars, divd. Phila., cwt., merchant quality	17.50	17.50	14.35
Steel, bars, Pitts, cwt.	17.50	17.50	14.35
Steel, bars, C.R., Pitts, cwt.	26.00	26.00	31.00
Steel, plates, Pitts., cwt.	25.75	25.75	24.25
Steel, plates, H.R., Pitts., cwt.	25.75	25.75	24.25
Steel, sheets, C.R., Detroit, cwt.	26.15	26.15	24.65
Steel, strip, C.R., Chi., cwt.	29.05	29.05	29.05
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	0.810	0.735	0.450
Antimony, in alloy, lb.	2.00	2.00	2.00
Beryllium-copper, cost ingot, lb.	4.95	4.95	4.60
Brass, red, 85%, [sheet], lb.	1.27	1.29	1.17
Brass, yellow, [sheet], lb.	1.21	1.23	1.11
Cadmium, ton lots, lb.	1.25	1.15	1.00
Copper, electrolytic, wire bars, refd., lb.	0.77	0.79	0.71
Copper sheet, over 24 in., lb.	1.36	1.38	1.34
Lead, common, N.Y., lb.	0.20	0.20	0.26
Magnesium, pig ingot, [99.8%], lb.	1.38	1.38	1.34
Mercury, 20 fl. lots, N.Y., fl.	288.00	275.00	340.00
Molybdenum Climax Oxide/bags, lb.	4.65	4.65	8.50
Nickel, electrolytic, producer, lb.	3.20	3.20	3.20
Platinum, producer, oz.	475.00	475.00	475.00
Silver, N.Y., oz.	12.20	11.62	9.11
Tin, Straights, N.Y., lb.	6.43	6.49	6.59
Zinc, Prime West, East St. Louis, lb.	0.46	0.43	0.42
Zinc, die casting alloy, No. 3, lb.	0.525	0.465	0.455
PAPER			
Uncoated book 13 offset, ton	680.00	680.00	800.00
Watermarked bond, ton	845.00	845.00	845.00
Gummed sealing tape, carton	15.50	15.50	15.70
Boxboard, mach. clay ctd. recycled sheets 80 bright, .016, ton	475.00	475.00	475.00
Wrapping paper, std. distribution cost, kraft, basis wt. 50 lb., roll	28.00	28.00	28.00
Kraft linerboard, 42 lb., unbleached, ton	290.00	270.00	270.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	0.262	0.252	0.248
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.00	0.98	0.98
Cotton middling, 1", N.Y., lb.	0.732	0.743	0.590
Printcloth, 48", 80x80, N.Y., spot. yd.	0.66	0.63	0.55
Army duck, 37", 13 oz., yd.	1.63	1.63	1.00
Blended printcloth, 64", 78x54, yd.	0.720	0.710	0.570
20s combed yarns	1.78	1.78	1.72
Wool tops, N.Y., lb.	3.60	3.60	3.60
CHEMICALS			
Acrylonitrile, tanks, lb.	0.43	0.43	0.46
Ammonia, anhydrous, fertilizer, wholesale, tanks, ton	150.00	150.00	210.00
Benzene, petroleum, tanks, Houston, gal.	1.50	1.51	1.47
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	0.56	0.56	0.66
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	0.106	0.106	0.101
Glycerine, synthetic, tanks, lb.	0.730	0.730	0.805
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	0.480	0.480	0.715
Naphthalene, crude, tanks, lb.	0.22	0.22	0.22
Phthalic anhydride, tanks, lb.	0.305	0.275	0.330
Polyethylene resin, low density liner film grade (market price), lb.	0.38	0.38	0.25
Polypropylene, homopolymer grade (market price), lb.	0.37	0.37	0.38
Polystyrene, general purpose grade (market price) lb.	0.37	0.37	0.38
Shellac, bone dry, N.Y., lb.	1.65	1.65	1.65
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	0.340	0.340	0.335
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	132.50	132.50	147.50
Sulphuric acid, 66%, commercial, tanks, ton	56.35	56.35	93.69
Titanium dioxide, anatase, reg., carlots lb.	0.69	0.69	0.69
Xylene tanks, gal.	1.33	1.33	1.45
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	335.10	346.50	292.70
Lumber 2x2, pine, mbf, cl	345.10	345.30	273.40
Plywood, plyform, 3/4", msf, cl	261.40	565.15	577.50
Plywood, 5/8", msf, cl	363.25	365.85	343.39
Cement, bulk, ton, tl	61.80	62.35	62.07
Sand, ton, cl	5.95	5.95	5.85
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	45.73	45.73	45.88
Crushed stone, 1½", ton, cl	7.90	7.89	7.75
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.75	0.75	0.75
Gypsum sheathing, ½"x1"x8", msf, tl	169.30	167.99	156.38
Brick, common, per thousand, tl	171.95	171.96	177.05
Asphalt paving, AC-20	158.58	157.00	154.82
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.69	6.69	6.55
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	26.00	25.25	24.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	31.75	31.25	31.25
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	0.790	0.865	0.970
Gasoline, 94 oct., reg., Chi., tank car, gal.	0.870	0.883	0.970
Heating oil, No. 2, Chi., bulk, gal.	0.848	0.829	0.905
Heating oil, No. 2, N.Y., bulk, gal.	0.868	0.858	0.940
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.25	25.98	26.00
Jet kerosene, gal.	0.830	0.825	0.930
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	0.490	0.490	0.380
SCRAP MATERIALS			
Steel, No. 1, hvy., divd., Pitts., ton	83.00	79.00	58.00
Steel, No. 1, hvy., divd., Chi., ton	77.00	73.00	51.00
Copper, No. 1, East, wholesale buy, divd., lb.	0.685	0.690	0.550
Copper, No. 2, East, wholesale buy, divd., lb.	0.598	0.615	0.480
Brass, red, East, wholesale buy, divd., lb.	0.645	0.655	0.510
Brass, yellow, East, wholesale buy, divd., lb.	0.360	0.365	0.310
Alum., old sheet/cast, E., wholesale buy, divd., lb.	0.490	0.430	0.230
Alum., mixed clip., E., wholesale buy, divd., lb.	0.510	0.450	0.245
Zinc, old, East, wholesale buy, divd., lb.	0.145	0.095	0.100
Lead, clean solids, East, wholesale buy, divd., lb.	0.115	0.103	0.160
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	25.00	5.00
Paper, old corrug. box, dlr., N.Y., ton	20.00	20.00	4.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	0.100	0.095	0.120
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	0.34	0.35	0.34

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

PurchasingWorld.
Business Systems Data File

Surveys show that the companies represented by the readers of *PurchasingWorld* spend about $5 billion a year on office systems, equipment, and supplies.

Impressive, yes. But some basic questions should be answered before anyone can get too puffed up about such a responsibility. How well is that money being spent? Is the job done by skilled office buyers, or is it palmed off to someone to do in his or her spare time? Are the techniques of cost/price analysis, value analysis, and standardization being applied to the purchase of office products? Are office buyers skilled and knowledgable enough to negotiate favorable contracts for everything from forms supplies to sophisticated office systems?

Development of these qualified buyers for business systems takes time and vast amounts of information. On the pages that follow are useful data and guidance that will help you develop that knowledge and reduce your investment of time.

Buying office furniture—a new purchasing specialty

A new breed of buyer is surfacing as the real nerve center of business shifts to the office—the specialist who handles specific families of office products, and does it with all the skills and techniques (e.g., systems contracting) of the industrial equipment buyer.

Purchasing for the office is far from being a sideline for these buyers. In a typical case, a senior buyer is responsible for the acquisition of all desks, files, furniture, partitions, flooring, carpeting, and related items. And he does the job as aggressively, analytically, and creatively as the most sophisticated industrial products buyer.

Pre-requisition planning

Planning for such buys, for example, in a Midwestern insurance company begins long before requisitions are turned into purchase orders. Purchasing works closely with all departments involved in equipping and operating the company's numerous offices. Any more-than-routine requirement or requisition is reviewed with the department head, corporate designers, and the planning staff. In some cases, the review is carried out with field property representatives.

The requirement is studied thoroughly. Will it fill a real need? Is there an alternative? Does it meet the company's standard specifications? If a change of style is indicated, can it be made within the company standard for the item? Does it create a problem of space allocation? Should the item be ordered for stock—and be considered for standardization?

As the "office revolution" picks up speed, this kind of coordinated planning is essential. Purchasing decisions on office furnishings can no longer be left to individual departments or users.

Just equipping an information processing station involves a lot more than the capability and reliability of its components. Combined purchasing-design-planning skills are needed to evaluate such matters as seating, keyboard and viewing heights, glare, and freedom of movement. All these elements can affect the health and efficiency of operators.

Suppliers, too, can play an important role as team members. A knowledgeable buyer gets the respect and cooperation from suppliers that an order-placer never would. The buyer previously mentioned knows the materials that go into the items he buys, how the items are made, and how they are used; so well, in fact, that he writes his own specifications for carpeting and draperies, and for some types of furniture.

Firing-line inspections

He regularly visits major suppliers and will make special trips when a large order is going through a vendor's plant. These are firing-line inspections, not mere courtesy calls.

On a recent visit, he stopped a desk supplier's assembly line when he noticed that the distance between the convenience tray and the top box drawer was too wide. On another occasion, he inspected a shipment of silk from India on a dock and rejected it on the spot because he knew it did not meet the company quality standard.

Standards committees

Large buyers of office furniture have standards committees similar to those that set standards for purchased industrial items.

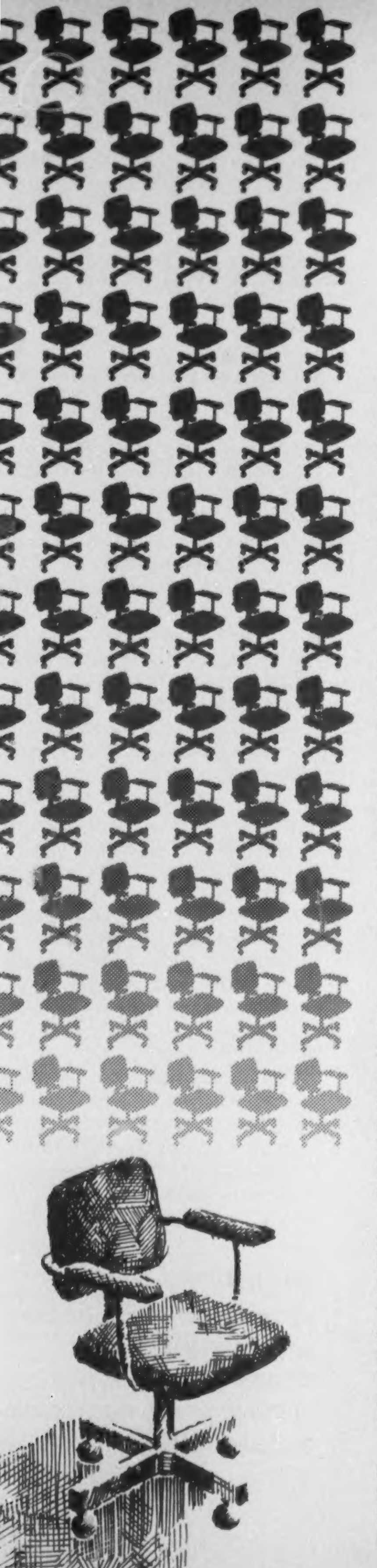
When designers or planners recommend a product for inclusion in the company standards catalog, purchasing generally obtains samples or prototypes from a number of suppliers. In some cases, the prototypes are mockups; in others, they may be from stock or custom-made products. Where special supplier effort is needed, the company usually pays for such samples or prototypes. After they have been tested, evaluation reports on their performance can be sent to the departments in which the products might be used.

Systems contracting

A similar standards program has enabled a regional telephone company to enjoy the benefits of systems contracting in furniture procurement. Systems contracting for high-volume, low-value items like office supplies is not unusual—the purchasing woods are full of such programs. But using the technique to buy big-ticket, low-volume office furniture—from $500 desks down to metal tables—is relatively rare since it's full of obstacles for the unwary.

Southern New England Telephone (SNET) broke through the usuual roadblocks and today has a successful systems contract furniture buying program in place. The two-year contract is with one dealer, representing a major manufacturer, to provide all items of conventional furniture. The furniture is inventoried and is sold by that dealer throughout Connecticut, where SNET has close to 200 locations.

The system has produced a uniform level of high-quality furniture, lower purchase prices, reduced administrative costs, and better service



for the company's locations.

It also meant happier days for purchasing. "Before the contract, we used to ask for multiple bids for every furniture project," says Tom Fox, manager of purchasing. "That meant higher operating costs, many different types and styles of furniture, each with a different set of prices."

Adds Frank Coyle, the buyer who handled the program from its inception: "We found ourselves calling as many as six dealers to request bids on one order. And more often than not, we ended up with really long leadtimes."

Committee Involvement

The first step in the program was fairly conventional: formation of a standardization committee made up of office planning and purchasing representatives. But SNET added a novel twist—early and deep involvement of four manufacturers chosen as potential suppliers.

The committee tentatively settled on a line of products available from four manufacturers that could meet SNET standards in respect to style and quality. This was done by discussions with each manufacturer and analysis of comparable items from their catalogs. The lines in the catalogs were all generic and appeared similar.

Then, armed with data on past and projected use of various furniture items, the committee approached the four suppliers. "We explained to each of them our standardization program and what we were trying to accomplish with it," says Fox. "We incidated we intended to award a two-year contract to a dealer for one manufacturer's line."

The committee took the unusual step of asking competitive manufacturers to evaluate those lines it had initally selected as standards: Do you think it's best for our needs? they were asked. Would you suggest another? What do you think of your competitors' quality in this product? Are you satisfied that you are bidding apples against apples?

Once all four manufacturers had agreed on SNET standards, they were asked to bid through their dealers. "We demanded that the suppliers give their dealers total support," says Fox. "We felt there was a need to reassure smaller dealers who might be nervous about the size of the contract."

Working out the deal was a lengthy process that involved meetings with dealers and discussions of problems in stocking and delivery they might have.

When the contract was finally drawn up, SNET had what it wanted—a two-year contract with pre-established pricing for two years and delivery within five working days from receipt of the order.

Meanwhile, the committee was taking steps to "sell" the program to using departments. Purchasing sent a letter to the entire organization announcing the furniture standards contract and the anticipated benefits. The letter, which helped implement the program and have it accepted, was followed by the standards catalog. Requisitions from the catalog go to office planning for review, then to purchasing, which issues orders to the dealer.

Tom Fox and Frank Coyle are happy, but realistic, about the program. "This is not an automatic bed of roses," says Coyle. "We have problems, for example, in maintaining stocking levels. At times, we may have the right number of dollars in the dealer's inventory, but in the wrong mix of products. But we are dealing with a high-level, carefully selected supplier. We know them, and they know us and our requirements, so the problems are not insoluble." ***PW***

Computer confusion? Better buying is needed

Business Week calls it "computer shock." Others use terms like "computerized chaos." But whatever the name, it refers to the same thing: rampant confusion in the personal computer market as sales skyrocket and manufacturers proliferate.*

Causing the turmoil for both customers and suppliers is a situation that should be familiar to veteran purchasing managers: the widespread lack of control over the purchase and application of the new machines.

What should be equally apparent is the need to get some order out of the mess by applying to computer acquisition the same expertise that well-run purchasing departments now use in buying other products—from commodity-type items to capital equipment.

Evidence of the computer confusion continues to mount:

■ Expert observers point to a lack of organization, communication, and coordination in many companies' procurement and use of computers.

Among the shortcomings noted in a roundtable discussion sponsored by Dennison National Company: haphazard buying of units by individuals; lack of standardization and compatibility in computerized "programs;" problems in linking up units with large corporate informaton systems; failure to take advantage of volume purchasing; inattention to contracts and service agreements.

■ A Dun & Bradstreet survey (2790 firms participated) revealed that 72% of those companies with more than 25,000 employees were *unable to supply detailed information on either the number or applications of their computers* [italics added].

Problems avoided

The news is not all bad, however. Some larger companies have moved to counter the dangers of computer "proliferation without coordination" with the same kind of analytical team buying they use in capital equipment acquisition. Some examples:

■ A year and a half ago the CEO of a large chemical company personally directed that the purchasing department be responsible for all computer procurement—from micros to mainframes. Purchasing is now a key member of a task force that also includes representatives from office systems and MIS—backed up as needed by legal and financial representatives.

■ Ford Motor Company is now buying an average of 100 desktop computers a month under a volume purchase agreement with Victor Technologies, Inc. Ford already has about 2000 micros and word processors in place in its domestic operations. Among the big users of the equipment: materials analysts.

■ Leading insurance companies have committees made up of personnel from several functions—e.g. MIS, office planning, and purchasing—that decide on standardization of capital equipment purchases, including computers, and selection of suppliers. One large insurance company recently issued an order for 3000 microcomputers from one supplier—IBM.

Control of that sort depends to a large extent on corporate management style, according to Robert McCarney, a participant in the Dennison session. McCarney, senior consultant with Arthur Young & Co., said that highly structured companies with strong, centralized purchasing have better control and a greater chance of integrating units into a communication network.

More loosely controlled companies, added McCarney, "where departments tend to be autonomous and have gone out and done their own thing are going to find it harder to make that linkage."

McCARNEY: "Highly structured companies with centralized purchasing have better control [over computer acquisition and use]."

MOODY: "Purchasing managers have an opportunity to position themselves as mediators between computer users and MIS personnel."

That "autonomy" of departments—and in some cases individuals—was identified as a primary cause of computer confusion. Panelist John Dykeman, executive editor of *Modern Office Procedures:*

"We have seen this trend to independent buying of the computer. People sneak a little micro into their budgets to do their own jobs. Then along comes data processing and says 'You didn't clear it with us; now it's not going to tie into our network.' Then the war starts. If there's no coordination, everybody is going to have their own little system."

Need for internal standards

Standardization—a basic part, of course, of any effective purchasing program—would be an important first step toward bringing order to computer confusion. Aside from its obvious value in permitting volume buying, it would enable users to interphase dissimilar types of equipment, so they can share the same databases and peripherals, thus enabling a free flow of information through the office network.

The initiative for that standardization should come from within the company said panelist Willoughby Anne Walsh, editor of *Word Processng and Information Systems.*

"Most corporations are looking for standards in office automation," she said. "But there is a need for both users and manufacturers to cooperate in the effort. The manufacturers should get together and set standards, but the users must direct them."

The vendor's role may not always be that easy, according to panelist James Moody, Atlantic area marketing manager for Wang Laboratories. Moody, noting that many corporations have not formalized their standards, observed that vendors often find themselves between a rock and a hard place with customers or prospects.

"We run into situations," he said, "in which we find ourselves talking to an MIS group, then to a user group, and they may not be talking to each other. So there we are between them, looking to the right, then to the left, saying 'What do I do now?' Is it our role to bring them together, or to point out what my company offers, or both?"

Why purchasing

Moody answered his own question, in effect, in a later interview with ***PurchasingWorld***. Purchasing managers whose companies have not whipped the computer confusion problem, he said, have an opportunity to position themselves as coordinators—or mediators, if necessary—between computer users and MIS personnel.

"To a certain extent, they can represent the vendors," he added. At the same time, they can point out to both sides the need for, and the benefits of, standardization, volume buying, negotiation of contracts, etc., in a computer program. Neither side can disagree with those commercial aspects. That will help everybody compromise on the most economic unit or system for a given purpose."

Purchasing managers, he added, should get to top management with the same arguments before computer proliferation and interdepartmental disputes get out of hand.

Moody had this further advice for purchasing staffers:

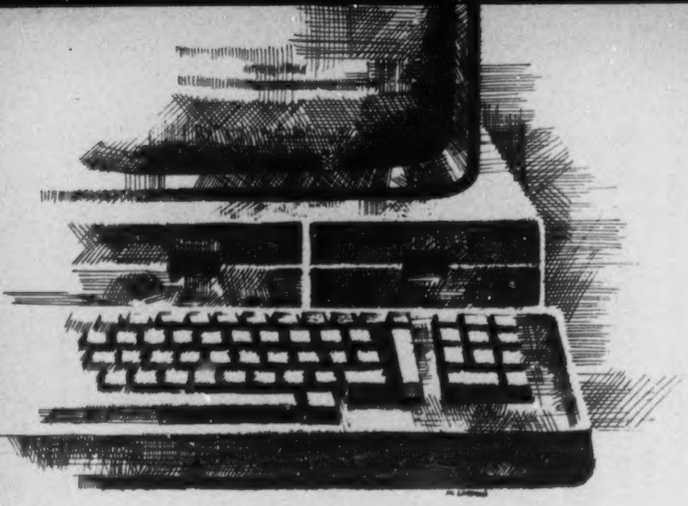
- Be sure you cover the waterfront in contracts—payment terms, installation, warranties (particularly when they go into effect), service, technical assistance, etc.
- Prepare yourself to understand maintenance and service contracts. You should have some knowledge of what happens after the machine has arrived.

In summary, what Moody and other experts are saying, adds up to this, from the purchasing point of view:

Purchasing managers should—indeed must—get deeply involved in computer acquisition, just as they have in procurement of other types of capital equipment.

Until they do, businesses will continue to suffer from computer confusion, will all its higher costs and inefficiency. ***PW***

*** A survey by Dun & Bradstreet shows that 63% of firms with 500 or more employees now use microcomputers, most of which were purchased in the last year. The impact of the computer revolution may exceed the predictions of even the most optimistic experts as the recovery picks up steam, according to Joseph W. Duncan, D&B's corporate economist. Current estimates put the number of personal computer manufacturers at more than 150.**



Desktop computers

Keeping track of the fast-moving personal or desktop computer market is an impossible task. It literally changes daily. Fortunately for professional buyers, the proliferation of computers for use in a strictly business environment is moving at a slightly slower pace—but only slightly.

The chart on these pages should help you considerably, since it contains only desktop systems suitable for business use. And although new models are being introduced continually, reference to this chart in the months ahead will help you identify potential suppliers.

Perhaps more than any other type of business equipment, desktop computers require thorough investigation to select the ones that will be "just right" for your applications. The fact that nearly all of them provide basic computing power merely makes the selection tougher. The deciding factor is often a matter of "how" they do it.

Blanks and dashes appearing in the chart indicate that the information was not provided or that the information did not fall within the specific feature listed. The notation "na" means "not available" or "not applicable."

Although extensive efforts have been made to ensure the completeness and accuracy of these charts, *PurchasingWorld* cannot be held liable for omissions or errors.

Product profile												**Company profile**			**Sales profile**					**Service profile**					
Manufacturer & model	Mfr's suggested price	Microprocessor word length (bits)	Std internal RAM (bytes)	Max internal RAM (bytes)	Std disk storage (bytes)	Max. opt disk storage (bytes)	Color display (std, opt, na)	Number of function keys	Graphics capability (std, opt, na)	Std operating system	Other operating systems	Annual sales (millions)	Year founded	Primary business	Mfr-direct sales	Mfr-owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr-direct service	Mfr-authorized service	Other service	Number of service locations
Cado Systems (Circle number 1)																									
Tiger ATS 64	$27,000	16	256K	1M	30M	1.1G	—	16	x	P	no	$55	1976	Business computers			x						x		
Canon U.S.A., Inc. (Circle number 2)																									
AS-100M	$2325	16	128K	512K	640K	10.6M	na	12	yes	CP/M-86	yes	$2500	1933	Photo & opical equipment	x		x		50[1]	3	yes	x	x		50[1]
AS-100C	$3025	16	128K	512K	640K	10.6M	std	12	yes	CP/M-86	yes														
Casio, Inc. (Circle number 3)																									
FP1000		8	64K	64K	640K	15M	opt	10	std	CASIO	yes	$120	1970	Business systems & consumer electronics			x	x		12		x	x	x	12
Centurian Computer Corp. (Circle number 4)																									
Microplus	$10,800	16	128K	512K	1.2M	32M	na	20	std	JCL	yes	$10	1971	Computers			x		40	6				x	40
Columbia Data Products (Circle 5)																									
MPC 1600-1	$3170	16	128K		640K	24M	opt	10	std	MS-DOS	yes		1975	IBM-PC compatible computers			x	x		3	no			x	
MPC 1600-4	$4770	16	128K		1.3M	24M	opt	10	std	MS-DOS	yes														
MPC VP	$2995	16	128K	256K	640K		opt	10	std	MS-DOS	yes														
Compucorp (Circle number 6)																									
745	$4495	8	64K	256K	—	—	na	22	na	?	yes	$35	1968	Computers	x	x	x	x	162	3	yes	x	x		162
775	$7620	8	64K	256K	1.2M	1.2M	na	22	na	?	yes														
785	$10,495	8	64K	256K	5.6M	15.6M	na	22	na	?	yes														
790	$11,995	8	64K	256K	10.6M	30.6M	na	22	na	?	yes														
795	$13,495	8	64K	256K	15.6M	45.6M	na	22	na	?	yes														

Computer Automation, Inc. (Circle number 7)																								
MicroSyFA	$4995	8	128K	256K	2M	11M	na	17	std	CP/M-86	no	$69	1975	Computers	x	x		25	1	yes	x	x		50
Computer Systems (Circle number 8)																								
PC/8088	$1988	16	64K	512K	320K	90M	std	83	std	MS/DOS	yes	—	1965	Computers & systems	x	x			90	yes	x	x		
Corona Data Systems (Circle number 9)																								
Corona PC	$2595	16	128K	512K	320K		opt		std	MS-DOS	yes			IBM PC compatible products	x		x							
Corona Portable PC	$2545	16	128K	512K	320K		na		std	MS-DOS	yes													
Cromemco (Circle number 10)																								
C-10SP	$1785	8	64K	64K	390K	780K	na	24	std	CDOS	yes	>$60	1976	Microcomputers	x	x	x	600	3	no	x		x	—
CS1H	$6995	8	64K	512K	21M	—	opt	—	std	CDOS	yes													
CS1D2	$4995	8/16	256K	2M	780K	21M	opt	—	std	CDOS	yes													
Datapoint Corporation (Circle number 11)																								
1560	$3995	8	64K	128K	—	—	na	5	na	—	yes	$508	1968	Computers	x	x				yes	x			
8600	$5950	16	128K	512K	—	—	na	5	na	—	yes													
Data Technology Industries (Circle number 12)																								
Associate	$2195	8	64K	256K	720K	5.7M	opt	29	std	CP/M	yes	$10	1976	Computer products	x	x	x	600	12	yes	x	x	x	50
Associate+	$2995	8	64K	256K	1.6M	6.6M	opt	29	std	CP/M	yes													
Associate+5	$3745	8	64K	256K	6M	6M	opt	29	std	CP/M	yes													
Associate OMS	$2695	8	64K	256K	720K	5.7M	opt	29	std	CP/M	yes													
Associate OMS+	$3195	8	64K	256K	1.6M	5.6M	opt	29	std	CP/M	yes													
Associate OMS+5	$3995	8	64K	256K	6M	6M	opt	29	std	CP/M	yes													
Associate+10	$4795	8	64K	256K	11M	11M	opt	29	std	CP/M	yes													
Associate OMS+10	$4995	8	64K	256K	11M	11M	opt	29	std	CP/M	yes													
Datavue (Circle number 13)																								
DV80-3043	$4995	8	64K	512K	6M	6M	opt	opt	opt	CP/M	yes	$34.6[4]	1973	Multi-user computer systems	x	x	x	—	6	yes		x		—
DV80-3053	$5245	8	64K	512K	12M	12M	opt	opt	CP/M	yes														
DV80-3073	$5595	8	64K	512K	19M	19M	opt	opt	CP/M	yes														
Digilog Business Systems, Inc. (Circle number 14)																								
DBS-16	$3495	16	256	512	720K	15M	opt	16	opt	CP/M-86	yes	—	1981	Desktop computers	x	x	x	>100	3	yes	x	x		
S1000	$2995	8	64K	64K	720K	1.6M	na	—	na	CP/M-80	no													
S1500	$4995	8	64K	64K	5M	15M	na	—	na	CP/M-80	no													
S1016	$3995	8/16	128K	256K	720K	1.6M	na	—	na	CP/M-86	yes													
S1516	$5995	8/16	128K	256K	5M	15M	na	—	na	CP/M-86	yes													
S1800	$6995	8/8	64	64	5M	50M	na	—	na	CP/M-80	yes													
Digital Equipment Corp. (Circle number 48)																								
DECmate II	$3745	12	96K	64K	800K	1.6M	na			CP/M	yes													
Rainbow 100	$3495	8/16	64K	256K	800K	1.6M	opt		opt	CP/M	yes													
Professional 325	$3995	16	256K	512K	800K	5M	opt			P/OS	yes													
Professional 350	$4995	16	256K	1.2M	800K	5M	opt			P/OS	yes													
Eagle Computer (Circle number 15)																								
IIE-1	$1595	8	64K	64K	390K	32M	na	32	na	CP/M	no		1981	Microcomputer systems			x	1000	12				x	190
IIE-2	$1995	8	64K	64K	700K	32M	na	32	na	CP/M	no													
IIE-3	$2995	8	64K	64K	1.6M	32M	na	32	na	CP/M	no													
IIE-4	$3995	8	64K	64K	10.2M	32M	na	32	na	CP/M	no													
PC-E	$1995	16	64K	64K	320K	32M	opt	24	opt	MS-DOS	yes													
PC-1	$2995	16	128K	128K	320K	32M	opt	24	opt	MS-DOS	yes													
PC-2	$3495	16	128K	128K	640K	32M	opt	24	opt	MS-DOS	yes													
PC-XL	$4495	16	128K	128K	10.3M	32M	opt	24	opt	MS-DOS	yes													
1620	$4495	16	128K	128K	1.6M	32M	opt	24	opt	MS-DOS	yes													
1630	$6695	16	128K	128K	10.8M	32M	opt	24	opt	MS-DOS	yes													
1640	$8995	16	512K	512K	32.8M	32.8M	opt	24	opt	MS-DOS	yes													
Facit, Inc. (Circle number 16)																								
DTC 6500 series	$3995	8	64K	160K	320K	5M	na	8	opt	CP/M	yes	—	1938	Office products			x		3	yes	x	x		

Product profile												Company profile			Sales profile					Service profile					
Manufacturer & model	Mfr's suggested price	Microprocessor word length (bits)	Std internal RAM (bytes)	Max internal RAM (bytes)	Std disk storage (bytes)	Max. opt disk storage (bytes)	Color display (std, opt, na)	Number of function keys	Graphics capability (std, opt, na)	Std operating system	Other operating systems	Annual sales (millions)	Year founded	Primary business	Mfr-direct sales	Mfr-owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr-direct service	Mfr-authorized service	Other service	Number of service locations
Four-Phase Systems, Inc. (Circle number 17)																									
PC-I	$2400	8	128K	128K	[2]	[3]	na	22	opt	CP/M	no														
PC-III	$2400	8	128K	128K	[2]	[3]	na	22	opt	CP/M	no														
Franklin Computer (Circle number 18)																									
ACE 1000	$1095	8	64	—	143K	858K	opt	—	std	DOS 3.3	yes	$30	1981	Computers			x	x	1000	3	no	x	x		
ACE 1200	$1995	8/16	64K	—	143K	858K	opt	—	std	CP/M	yes														
Hewlett-Packard (Circle number 48)																									
75C	$995	8	16K	24K	na	na	na	na	na	BASIC	no	$4300	1939	Computers & instrumentation	x		x	x	>200	3	yes	x	x		>200
85B	$2295	8	32K	32K	270K	9.6M	na	12	std	BASIC	yes														
86B	$1595	8	128K	640K	—	9.6M	na	14	std	BASIC	yes														
87XM	$2995	8	128K	640K	—	9.6M	na	14	std	BASIC	yes														
120	$2775	8	64K	64K	—	4.8M	na	8	na	CP/M	no														
125	$2775	8	64K	64K	—	4.8M	na	8	na	CP/M	no														
150	$3995	16	256K	690K	540K	9.6M	na	8	std	MS-DOS	no														
9816	$3985	16/32	128K	768K	—	65M	na	10	std	BASIC	yes														
9836	$12,110	16/32	128K	2M	540K	65M	opt	10	std	BASIC	yes														
Honeywell (Circle number 49)																									
microSystem 6/10	$3995	16	128K	512K	650K	20.8M	na	40	opt	MS-DOS	yes	$5500	1885	Advanced technology	x		x		100	3	x	x		x	
IBM (Circle number 19)																									
Personal Computer		16	64K	640K	180K	20.7M	opt	83	std	MS-DOS	yes			Computers	x	x	x	x		3	yes	x			
Personal Computer XT		16	128K	640K	10.3M	20.7M	opt	83	std	MS-DOS	yes														
Intecolor Corporation (Circle number 20)																									
3651	$2945	8	32K	na	90K	na	std	16	std	FCS	no	$34.6[4]	1973	Color computers & terminals	x		x		28	3	yes	x	x		17
8364	$8130	8	64K	na	1.9M	na	std	16	std	CP/M	no														
8064	$7085	8	64K	na	1.9M	na	std	16	std	CP/M	no														
Intertec Data Systems (Circle number 21)																									
Superbrain II—Jr.	$2495	8	64K	—	350K	—	na	—	na	CP/M	no	$19	1973	Microcomputers						12	yes	yes	x	x	>200
Superbrain II—QD	$2995	8	64K	—	700K	—	na	—	na	CP/M	no														
Superbrain II—SD	$3495	8	64K	—	1.5M	—	na	—	na	CP/M	no														
Compustar 10 VPU	$1995	8	64K	—	na	—	na	—	na	CP/M	no														
Compustar 20 VPU	$2995	8	64K	—	360K	—	na	—	na	CP/M	no														
Compustar 30 VPU	$3495	8	64K	—	700K	—	na	—	na	CP/M	no														
Compustar 40 VPU	$3995	8	64K	—	1.5M	—	na	—	na	CP/M	no														
Intertube III	$895	8	64K	—	na	—	na	—	na	CP/M	no														
Kaypro Corporation (Circle number 22)																									
Kaypro II	$1595	8	64K	—	400K	—	na	18	na	CP/M	no		1953	Portable computers				x	890	3	no	x		x	
Kaypro 4	$1995	8	64K	—	800K	—	na	18	na	CP/M	no														
Kaypro 10	$2795	8	64K	—	10.4M	na	18	std	CP/M	no															
Lanier Business Products, Inc. (Circle number 23)																									
EZ-1	$4995	8	196K	256K	5M	—	na	—	std	—	—	$400	1934	Office automation products	x		x		348	—	yes	x	x		348
LCGW-100	$9995	8	196K	256K	5M	—	std	—	std	—	—														
EZ-2	$4195	8	256K	—	5M	—	na	—	std	—	—														

Product profile												Company profile			Sales profile					Service profile					
Manufacturer & model	Mfr's suggested price	Microprocessor word length (bits)	Std internal RAM (bytes)	Max internal RAM (bytes)	Std disk storage (bytes)	Max. opt disk storage (bytes)	Color display (std, opt, na)	Number of function keys	Graphics capability (std, opt, na)	Std operating system	Other operating systems	Annual sales (millions)	Year founded	Primary business	Mfr-direct sales	Mfr-owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr-direct service	Mfr-authorized service	Other service	Number of service locations
Master Computers (Circle number 24)																									
Master PC	$2595	8	64K	128K	1M	26M	na	30	opt	CP/M	yes		1983	Computer systems	x		x	x	200	3	no	x	x		
Micro Five Corporation (Circle number 25)																									
1050	$4495	16	128K	512K	2M	39M	na			CP/M-86	yes	—	1977	Microcomputer systems			x	x	—	3	no		x		
1440	$7995	16	128K	512K	13.8M	39M	na			CP/M-86	yes														
1540	$8995	16	128K	512K	20M	39M	na			CP/M-86	yes														
Micro Technology Unlimited (Circle number 26)																									
MTV-140	$3900	8	80K	1.2M	—	1M	na	10	std	CODOS	yes	$1	1978	Microcomputers	x				50		no	x			1
Monroe Systems for Business (Circle number 27)																									
OC 8820	$3895	8	128K	128K	322K	20M	na	8	na	MOS	no	—	1913	Office equipment	x				350	3	yes	x			350
NCR Corp. (Circle number 50)																									
Decision Mate V	$2650	8/16	64K	512K	640K	10M	opt	20	std	CP/M	yes	$3500	1884	Computers	x		x	x		3	x	x			
NEC Home Electronics (U.S.A.), Inc. (Circle number 28)																									
PC-8800	$2497	8	64K	396K	720K	15M	opt	5	std	CP/M	yes	$5000[5]	1899[5]	Electronics[5]	x		x	x	—	3	x	x	x		200
PC-8800	$3092	16	64K	396K	720K	15M	opt	5	std	CP/M	yes														
NEC Information Systems, Inc. (Circle number 29)																									
APC		16	128K	256K	1.2M	2.4M	opt	22	opt	CP/M-86	yes	$5000[5]	1899[5]	Electronics[5]											
Onyx Systems Inc. (Circle number 30)																									
Sundance-16	$13,990	16	256K	512K	14M	42M	—	4	na	UNIX	no	$58.7	1979	Winchester disk drives and microcomputers	x		x	x	250	3	yes	x	x	x	
Sundance II	$7590	8	192K	—	7M	42M	—	4	na	CP/M	yes														
Sundance	$6950	8	64K	—	7M	42M	—	4	na	CP/M	yes														
System 2000	$6750	16	64K	256K	6M	18M				MP/M-86															
System 3000	$12,250	16	64K	512K	20M	80M				OASIS-16															
C5002A	$11,990	16	256K	512K	14M	42M				UNIX															
C5001/MV	$8740	8	256K	—	14M	42M				CP/M	yes														
C5001A	$5990	8	192K	—	7M	42M				CP/M	yes														
C8002	$18,500	16	512K	1M	20M	160M				UNIX															
C8002A	$13,990	16	256K	512K	20M	160M				UNIX															
C8001/MV	$11,490	8	256K	512K	20M	160M				CP/M	yes														
Otrona Advanced Systems Corp. (Circle number 31)																									
Attache' S	$2695	8	64K	128K	360K	720K	na		std	CP/M	no		1979	Computers	x			x		3	yes		x	x	
Attache'	$2995	8	64K	128K	720K	720K	na		std	CP/M	no														
Attache' S 8:16	$3495	8/16	256K	256K	360K	720K	na		std	CP/M	yes														
Attache' 8:16	$3795	8/16	256K	256K	720K	720K	na		std	CP/M	yes														
Perkin-Elmer Data Systems Group (Circle number 32)																									
7500	$11,500	16	416K		10M		opt	44	std	IDRIS	no	$1000+	1938	High-tech systems	x				200		yes	x			87
3205	$24,950	32	512K	4M	50M	1.2G	na	na	OS/32	yes															
Polymorphic Systems (Circle number 33)																									
8810	$3995	8/16	320K	1M	1M	70M	std	28	std	CP/M	yes	$12	1975	Computers			x	x	200	12	no	x	x		50
8810/2	$4839	8/16	320K	1M	2M	70M	std	28	std	CP/M	yes														
8813	$5995	8/16	320K	1M	2M	70M	std	28	std	CP/M	yes														

Product profile												Company profile			Sales profile					Service profile					
Manufacturer & model	Mfr's suggested price	Microprocessor word length (bits)	Std internal RAM (bytes)	Max internal RAM (bytes)	Std disk storage (bytes)	Max, opt disk storage (bytes)	Color display (std, opt, na)	Number of function keys	Graphics capability (std, opt, na)	Std operating system	Other operating systems	Annual sales (millions)	Year founded	Primary business	Mfr-direct sales	Mfr-owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr-direct service	Mfr-authorized service	Other service	Number of service locations
Quay Corp. (Circle number 34)																									
500/520/540	$1995-$2995	8	64K	208K	400K-1.6M	20M	opt	96	opt	CP/M & MP/M	no														
550/560/590	$4995-$6300	8	208K	208K	5M-20M	20M	opt	96	opt	CP/M & MP/M	no														
900	$3795	8	64K	208K	2.5M	40M	opt	96	opt	CP/M & MP/M	no														
910	$8495	8	208K	208K	10M	40M	opt	96	opt	MP/M	no														
936	$9995	8	208K	208K	36M	40M	opt	96	opt	MP/M	no														
SD Systems, Inc. (Circle number 35)																									
SD300-OEM	$4600	8	256K	1M	1.5M	—	na	4	na	CP/M	yes	$10	1975	Microcomputers, boards, & systems	x		x		25	12	no	x			1
Stearns Computer Systems (Circle number 36)																									
Desktop	$2945	16	128K	896K	320K	20M	opt	10	opt	MS-DOS	yes	$18	1982	Microcomputers			x		57				x		57
Tano (Circle number 37)																									
AVT-2A	$1995	8	64K	310K	143K	10M	std	10	std	DOS3.3	yes	$31	1972	Computers & systems				x	35	3	no	x	x		5
TeleVideo Systems Inc. (Circle number 38)																									
TS-802	$3495	8	64K	—	1M	—	na	11	—	CP/M	—	$98.5	1975	Microcomputers & terminals			x	x	—	6	no	x	x		
TS-802H/20	$5995	8	64K	—	20.5M	—	na	11	—	CP/M	—														
TS-803	$2495	8	64K	128K	1M	—	na	16	std	CPJ/M	—														
TS-806/20	$6995	8	64K	—	20.5M	—	na	—	—	CP/M	yes														
TS-816/40	$12,995	8	128K	—	57.5M	—	na			CP/M	yes														
TS-1603	$2995	16	128K	256K	2M	—	na	16	opt	CP/M-86	yes														
Portable I	$1599	8	64K	128K	500K	1M	na	16	std	CP/M	no														
Texas Instruments (Circle number 39)																									
TI Professional	$2195	16	64K	256K	320K	10M	opt	12	opt	MS-DOS	yes		1930	Computers & electronics	x		x	x	>350	3	yes	x	x		120
3000 Series	$12,495	16	128K	512K	5M	43M	na	8	na	DX10	—														
Vector Graphic, Inc. (Circle number 40)																									
Vector 4/00	$2795	8/16	128K	256K	none		na	15	std	CP/M	yes	$40	1976	Microcomputers			x	x	450	3	no		x	x	
Vector 4/10	$3295	8/16	128K	256K	630K		na	15	std	CP/M	yes														
Vector 4/20	$3995	8/16	128K	256K	1.2M		na	15	std	CP/M	yes														
Vector 4/30	$4995	8/16	128K	256K	5.6M		na	15	std	CP/M	yes														
Vector 4/40	$5995	8/16	128K	256K	10.6M		na	15	std	CP/M	yes														
Vector 4/60	$9995	8/16	128K	256K	46M		na	15	std	CP/M	yes														
Vector 5005E	$6250	8	128K	256K	5.6M		na	15	na	CP/M	no														
Vector 5010E	$6750	8	128K	256K	10.6M		na	15	na	CP/M	no														
Vector 5032E	$11,995	8	128K	256K	32.6M		na	15	na	CP/M	no														
Victor Technologies, Inc. (Circle number 51)																									
9000	$4995	16	128K	896K	1.2M	—	na	—	std	MS-DOS	yes			Computers	x		x	x							
9000 Hard Disk	$5995	16	256K	896K	11.2M	—	na	—	std	MS-DOS	yes														

Product profile												Company profile			Sales profile					Service profile					
Manufacturer & model	Mfr's suggested price	Microprocessor word length (bits)	Std internal RAM (bytes)	Max internal RAM (bytes)	Std disk storage (bytes)	Max, opt disk storage (bytes)	Color display (std, opt, na)	Number of function keys	Graphics capability (std, opt, na)	Std operating system	Other operating systems	Annual sales (millions)	Year founded	Primary business	Mfr-direct sales	Mfr-owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr-direct service	Mfr-authorized service	Other service	Number of service locations
Visual Technology (Circle number 41)																									
Visual 1050	$2695	8	96K	160K	400K	10M	na	17	std	CP/M+	yes	$50	1978	Computers & terminals			x	x		3	yes	x	x		
Wang Laboratories, Inc. (Circle number 42)																									
Professional Computer	$2595	16	128K	640K	360K	10M	na	101	std	MS-DOS	yes	$1700	1951	Office automation systems	x		x	x							
Wicat Systems (Circle number 43)																									
Wicat System 150	$9500	16	256K	1.5M	10M	43M	na	4	opt	MCS	yes	$27	1981	Microcomputers	x				15	1	yes	x		x	
Wintek Corporation (Circle number 44)																									
Sprint 68	$3949	8	48K	56K	512K	512K	na	—	na	Wizrd	yes	$0.6	1973	OEM microcomputers	x					12	no	x			1
WTI (Circle number 45)																									
Wildcat 102	$1250	8	64K	64K	320K	320K	opt	41	std	—	yes	$23	73	Computers & periph.			x	x	1250	3	yes	x	x		18
Xerox Corporation (Circle number 46)																									
Xerox 820-II		8	64K	—	155K	8M	na	—	std	CP/M	—		1906	Information systems	x			x	250		yes	x			200
Xerox 16/8	$3395	8/16	128K	256K	155K	10M	na	18	std	CP/M	yes														
Zenith Data Systems (Circle number 47)																									
ZF-100-21	$2899	8/16	128K	768K	320K	2.6M	opt	13	opt	[6]	no	$100	1979	Desktop computers, peripherals & software	x		x	x	950	3	x		x		400
ZF-110-22	$3499	8/16	128K	768K	640K	2.6M	std	13	std	[6]	no														
ZF-120-22	$3599	8/16	128K	768K	640K	2.6M	opt	13	opt	[6]	no														
ZF-110-32	$5499	8/16	192K	768K	11.3M	13.3M	st	13	std	[6]	no														
ZF-120-32	$5599	8/16	192K	768K	11.3M	13.3M	std	13	std	[6]	no														
Z-90-80	$2499	8	64K	64K	160K	480K	na	12	na	CP/M	no														

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[1] Company owned
[2] Two disk drives standard
[3] Hard and floppy disks may be added
[4] Parent company, Intelligent Systems Corp.
[5] Parent company
[6] CP/M and Z-DOS operating systems
[7] Proprietary

Cedo Systems
2055 W. 190th
Torrance CA 90510
213-323-8170

Canon U.S.A., Inc.
One Canon Plaza
Lake Success NY 11042
516-488-6700

Casio, Inc.
15 Gardner Road
Fairfield NJ 07006
201-575-7400

Centurion Computer Corp.
1780 Jay Ell Drive
Richardson TX 75081
214-699-8400

Columbia Data Products
9150-D Rumsey Road
Columbia MD 21045
301-992-3400

Compucorp
211 Michigan Avenue
Santa Monica CA 90404
213-829-7453

Computer Automation, Inc.
1800 Jay Ell Drive
Richardson TX 75081
214-783-0993

Computer Systems
26401 Harper
St. Clair Shores MI 48081
313-779-8700

Corona Data Systems
31324 Via Colinas Ste. 110
Westlake Village CA 91316
213-706-1505

Cromemco
280 Bernardo Avenue
Mt. View CA 94039
415-964-7400

Datapoint Corporation
9725 Datapoint Drive
San Antonio TX 78284
512-699-7000

Data Technology Industries
701A Whitney Street
San Leandro CA 94577
415-678-1[illegible]06

Datavue
a company of Intelligent Systems Corp.
225 Technology Park
Norcross GA 30012
404-449-5961

Digilog Business Systems, Inc.
P. O. Box 425
Montgomeryville PA 18936
215-628-4810

Digital Equipment Corporation
146 Main Street
Maynard MA 01754
617-897-5111

Eagle Computer
983 University Avenue
Los Gatos CA 95030
408-395-5005

Facit, Inc.
235 Main Dunstable Road
Nashua NH 03061
603-883-4157

Four-Phase Systems, Inc.
10700 North DeAnza Boulevard
Cupertino CA 95014
408 225-0900

Franklin Computer
2128 Route 38
Cherry Hill NJ 08002
609-482-5900

Hewlett-Packard
Personal Computer Group
974 E. Arques Avenue
Sunnyvale CA 94086
408-735-1550

Honeywell
Honeywell Plaza
Minneapolis MN 55408
612-870-5200

IBM Corporation
900 King Street
Rye Brook NY 10573
914-934-4000

Intecolor Corporation
a company of Intelligent Systems Corp.
29563 N. Western Highway
Southfield MI 48034
313-357-4111

Intertec Data Systems Corp.
2300 Broad River Road
Columbia SC 29210
803-798-9100

Kaypro Corporation
533 Stevens Avenue
Solana Beach CA 92075
619-481-3424

Lanier Business Products, Inc.
1700 Chantilly Drive
Atlanta GA 30324
404-329-8000

Master Computers
5732 Thornwood Drive
Goleta CA 93117
805-967-2353

Micro Five Corporation
17791 Sky Park Circle
Irvine CA 92714
714-957-1517

Micro Technology Unlimited
2806 Hillsborough Street
Raleigh NC 27605
919-833-1458

Monroe Systems for Business
The American Road
Morris Plains NJ 07950
201-993-2374

NCR Corporation
Dayton, OH 45479
800-225-5627

NEC Home Electronics (U.S.A.), Inc.
1401 Estes Avenue
Elk Grove Village IL 60007
312-398-3963

NEC Information Systems, Inc.
5 Militia Drive
Lexington MA 02173
617-862-3120

Onyx Systems Inc.
25 East Trimble Road
San Jose CA 95131
408-946-6330

Otrona Advanced Systems Corp.
4725 Walnut Street
Boulder CO 80301
303-444-8100

Perkin-Elmer Data Systems Group
106 Apple Street
Tinton Falls NJ 07724
201-870-4335

Polymorphic Systems
5730 Thornwood Drive
Santa Barbara CA 93117
805-967-0468

Quay Corp.
P. O. Box 386
Freehold NJ 07728
201-681-8700

SD Systems, Inc.
10111 Miller Road
Dallas TX 75238
214-340-0303

Stearns Computer Systems
3501 Raleigh Avenue S.
Minneapolis MN 55416
612-929-4400

Tano
4301 Poche Court W.
New Orleans LA 70129
504-254-3500

TeleVideo Systems Inc.
1170 Morse Avenue
Sunnyside CA 94086
408-745-7760

Texas Instruments
Data Systems Group
P. O. Box 402430
Dallas TX 75240
1-800-527-3500

Vector Graphic, Inc.
500 N. Ventu Park Road
Thousand Oaks CA 91320
805-499-5831

Victor Technologies, Inc.
380 El Pueblo Road
Scotts Valley CA 95066
408-438-6680

Visual Technology
540 Main Street
Tewksbury MA 02129
617-851-5000

Wang Laboratories, Inc.
One Industrial Avenue
Lowell MA 01851
617-459-5000

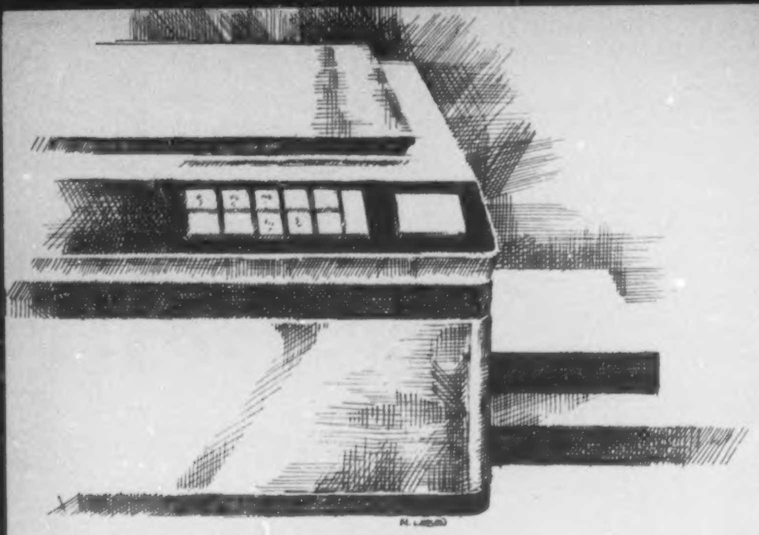
Wicat Systems
441 Lexington Avenue Ste. 608
New York NY 10017
212-697-4740

Wintec Corporation
1801 South Street
Lafayette IN 49704
317-742-8428

WTI Peripherals & Computers
1530 S. Sinclair
Anaheim CA 92806
714-978-9820

Xerox Corporation
Xerox Square
Rochester NY 14644
716-427-5400

Zenith Data Systems
1000 Milwaukee Avenue
Glenview IL 60025
312-391-7000



Copiers

The shakeout in copier manufacturers predicted a year or two ago has not yet come about. Few companies have left the market, and those remaining have continued to introduce new models with more sophisticated features.

The most noteworthy trend in copiers is the introduction of models that can enlarge as well as reduce copies. And the move away from coated paper to plain paper continues.

The data presented in this chart were provided by the various copier manufacturers. They are intentionally limited in order to serve as a fast reference to manufacturers and the equipment they make. Thus, we have provided profiles of each company's sales and service organization as well as the copiers they produce. The primary value of this chart is in helping you quickly find the sources for the products you wish to investigate further.

Blanks and dashes appearing in the chart indicate that the information was not provided or did not fall within the definition of the feature listed. The notation "na" means "not available" or "not applicable."

Although extensive efforts have been made to ensure the completeness and accuracy of these charts, *PurchasingWorld* cannot be held liable for omissions or errors.

Product profile									Company profile			Sales profile					Service profile					
Manufacturer & model	Mfr's suggested price	Recommended monthly volume (thousands)	Copies per minute	Sheet (S) or roll (R) fed	Plain(P) or coated(C) paper	Reduction capability	Rent or lease plan	Year introduced	Annual sales (millions)	Year founded	Primary business	Mfr-direct sales	Mfr-owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr-direct service	Mfr-authorized service	Other service	Number of service locations
A.B. Dick Co. (Circle number 56)																						
955	$2495	<5	11	S	P	no	yes	1982	$500	1884	Copying & duplicating equipment	x	x	x		652		yes	x	x	x	652
975	$3395	5-15	18	S	P	no	yes	1982														
985	$3595	5-15	18	S	P	no	yes	1983														
995	$5695	<25	30	S	P	no	yes	1982														
995R	$6695	<30	30	S	P	yes	yes	1982														
998Re	[2]	50K	40	S	P	yes	yes	1983														
Adler-Royal Business Machines, Inc. (Circle number 57)																						
TA 211	$2295	<5	12	S	P	no	no	1983		1963	Office equipment			x		>2000	3	no		x		
TA 218R	$3495	<10	12	S	P	yes	no	1983														
TA 223	$4995	<25	23	S	P	no	no	1982														
TA 230RE	$5295	<30	30	S	P	yes	no	1983														
Canon USA, Inc. (Circle number 58)																						
PC-10	$995	<0.5	—	S	P	no	[1]	1982	$778	1965	Business, office, & photo equipment				x	600	3	no		x		600
PC-20	$1295	<0.5	8	S	P	no	[1]	1982														
NP-120	$2395	<2.5	12	S	P	no	[1]	1982														
NP-125	$2895	<2.5	12	S	P	[1]	yes	1982														
NP-210	$3595	5-15	21	S	P	no	[1]	1983														
NP-300AF	$6195	7-30	30	S	P	yes	[1]	1983														
NP-400AF	$8195	8-40	40	S	P	yes	[1]	1983														
NP-500AF	$8995	10-50	50	S	P	yes	[1]	1983														

Docutel Olivetti Corp. (Circle number 59)																		
Copia 1000	$2395	5	12	S	P	no	yes	1981	$400	1911	Office equipment	x	x	1200	3		x	1200
Copia 1710	$3595	10	15	S	P	no	yes	1982										
Copia 1810	$4395	10	15	S	P	yes	yes	1982										
Facit (Circle number 60)																		
2350	$1995	5	8	S	P	no	no	1981		1938	Office systems		x	860	[1]		x	6
Gestetner Corp. (Circle number 61)																		
2000	$2695	<3	12	S	P	no	yes	1983										
2001	$3595	<6	12	S	P	no	yes											
2002R	$3295	<5	12	S	P	yes	yes	1983										
2003	$4595	<20	15	S	P	no	yes											
2004	$5095	<20	15	S	P	no	yes											
2005R	$3595	<7	12	S	P	yes	yes	1983										
2006	$5295	<20	23	S	P	no	yes											
2008RE	$5695	30	30	S	P	yes	yes	1983										
2010	$2495	<6	12	S	P	no	yes											
2020	$3795	3-15	20	S	P	no	yes											
2045R	$14,995	60	45	S	P	yes	yes	1983										
Minolta (Circle number 62)																		
EP 300	$2195	<3	12	S	P	no	[1]	1982	—	—	Cameras & copiers		x	275	3	[1]	x	275
EP 300RE	$2935	<3	12	S	P	yes	[1]	1982										
EP 320	$3995	<5	18	S	P	no	[1]	1981										
EP 450	$3795	<15	25	S	P	no	[1]	1983										
EP 450Z	$4595	<15	25	S	P	yes	[1]	1983										
EP 530	$5495	5-15	25	S	P	no	[1]	1981										
EP 530RII	$5295	5-15	30	S	P	yes	[1]	1983										
EP 710	$9995	15-40	40	S	P	yes	[1]	1980										
Mita Copystar America, Inc. (Circle number 63)																		
DC-122	$1995	3	12	S	P	no	[1]	1983	$104	1973	Copiers & supplies		x	470	[1]	[1]	x	470
DC-133R	$2795	7	12	S	P	yes	[1]	1982										
DC-181R	$3295	7	12	S	P	yes	[1]	1983										
DC-211	$3295	15-20	20	S	P	no	[1]	1983										
DC-312RE	$5295	30	30	S	P	yes	[1]	1983										
Monroe Systems for Business (Circle number 64)																		
RL612	$1795	5	12	S	P	no	yes	1981		1913	Office equipment	x		350	3	yes	x	350
RL614	$2095	5	12	S	P	no	yes	1983										
RL618	$2695	10	18	S	P	no	yes	1982										
RL620R	$2895	10	18	S	P	yes	yes	1983										
N.B.S. Roneo (Circle number 65)																		
Rabbit	$895	1	6	S	C	no	—	1982										
1005	$1995	5	10	S	P	no	—	1981										
1015	$2395	10	15	S	P	no	—	1983										
R230	$4950	30	30	S	P	no	—	1982										
Olympia USA Inc. (Circle number 66)																		
Olympia 001	$2495	<5	10	S	P	no	[1]	1981	$100	1940	Office equipment		x	1500	3	[1]	x	1500
Panasonic (Circle number 67)																		
FP-1300	$2495	<3	13	S	P	no	[1]	1982	$2500	1960	Electronics		x		3	no	x	
FP-1310R	$2795	<3	13	S	P	yes	[1]	1983										
FP-1801	$3295	<10	18	S	P	no	[1]	1981										
FP-1802	$3495	<10	18	S	P	no	[1]	1983										
FP-3002	$4995	<30	30	S	P	no [1]	1983											
FP-3010R	$5995	<30	30	S	P	yes	[1]	1982										
Pitney Bowes (Circle number 68)																		
PB 9600	$6495	5-40	30	S	P	yes	yes	1981	$1455	1920	Office equipment	x		131	3			600

Product profile									Company profile			Sales profile					Service profile					
Manufacturer & model	Mfr's suggested price	Recommended monthly volume (thousands)	Copies per minute	Sheet (S) or roll (R) fed	Plain(P) or coated(C) paper	Reduction capability	Rent or lease plan	Year introduced	Annual sales (millions)	Year founded	Primary business	Mfr-direct sales	Mfr-owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr-direct service	Mfr-authorized service	Other service	Number of service locations
PBC	$2695	1-15	37	S	P	no	yes	1975														
PBC2	$7295	5-30	30	S	P	yes	yes	1980														
3800	$5995	3-10	20	S	P	yes	yes	1983														
458	$1295	0.5-2	11	R	C	no	yes	1978														
458AF	$1395	0.3-3	9	R	C	no	yes	1978														
5200	$2595	0.5-5	15	S	P	no	yes	1980														
Ricoh of America Inc. (Circle number 69)																						
FT3020	$2595	<7	15	S	P	no	—	1983	—	1935	Office equipment			x	x	175	3			x		175
FT3050	$3695	<7	15	S	P	yes	--	1983														
FT4030	$3595	<10	18	S	P	no	—	1982														
FT4060	$4595	<15	20	S	P	yes	—	1982														
FT6200FR	$6995	<25	30	S	P	yes	—															
FT6600FDS	$12,995	<35	35	S	P	yes																
Royal Business Machines, Inc. (Circle number 70)																						
Royal 110	$2595	2.5	10	S	P	no	yes	1981	—	1904	Office equipment		x		x			yes	x			
Royal 115	$3995	15	15	S	P	no	yes	1978														
Royal 122	$3995	25	22	S	P	no	yes	1981														
Royal 1602MR	$4495	21	16	S	P	yes	yes	1983														
Royal 130R	$5995	30	30	S	P	yes	yes	1983														
Royal 3302MR	$6795	30	33	S	P	yes	yes	1983														
Royal 145R	$9995	100	45	S	P	yes	yes	1982														
Sanyo (Circle number 71)																						
SFT 800	$2395	<5	13	S	P	no	yes	1983	$6000	1950	Electronics			x		150	6			x		150
SFT 850 E (voice)	$2495	<5	13	S	P	no	yes	1983														
SFT 1100	$3495	<10	15	S	P	yes	yes	1983														
SFT 1150 2E (voice)	$3595	<10	15	S	P	yes	yes	1983														
Sevin Corporation (Circle number 72)																						
840	$1795	<3	12	S	P	no	yes	1980	$427	1959	Copiers	x	x	x		600	3	yes	x	x		600
895	$6595	<35	28	S	P	yes	yes	1981														
5020	$4795	<10	18	S	P	yes	yes	1983														
5030	$5495	<50	30	S	P	yes	yes	1983														
5040	$7795	<50	40	S	P	yes	yes	1983														
Sharp (Circle number 73)																						
SF-750	$1795	<4	10	S	P	no	yes	1983		1912	Electronics			x	x	500	3	'	x	x		500
SF-771	$3595	<10	15	S	P	no	yes	1982														
SF-781	$4395	10	15	S	P	yes	yes	1982														
SF-815	$4895	5-25	25	S	P	no	yes	1982														
SF-825	$5495	5-25	25	S	P	yes	yes	1983														
SF-900	$6495	5-40	40	S	P	yes	yes	1983														
Toshiba America, Inc. (Circle number 74)																						
BD-3701	$2295	<7	12	S	P	no	'	1983		1965	Industrial electronics				x	250	3	no		x		250
BD-4511	$3295	<10	15	S	P	yes	'	1982														

Product profile									Company profile			Sales profile					Service profile					
Manufacturer & model	Mfr's suggested price	Recommended monthly volume (thousands)	Copies per minute	Sheet (S) or roll (R) feed	Plain (P) or coated (C) paper	Reduction capability	Rent or lease plan	Year introduced	Annual sales (millions)	Year founded	Primary business	Mfr-direct sales	Mfr-owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr-direct service	Mfr-authorized service	Other service	Number of service locations
BD-4515	$3995	<10	15	S	P	yes	[1]	1983														
BD-7812	$6595	<25	15	S	P	yes	[1]	1983														
Van Dyk Research Corp. (Circle number 75)																						
4000	$18,000	20-150	67	R	P	no	yes	1971		1964	Photocopiers & supplies	x						yes		x		17
4100	$22,500	20-150	67	R	P	no	yes	1982														
Xerox Corporation (Circle number 76)																						
660	$995	<0.5	11	S	Y	no	yes	1968		1906	Information systems	x			x	250		yes	x			200
1020	$1995	0.5+	11	S	P	no	yes	1982														
1045	$7495	4+	40	S	P	yes	yes	1983														
1075	$46,375	25+	70	S	P	yes	yes	1982														
2300	$2495	<5	10	S	P	no	yes	1979														
2350	$2495	<5	10	S	P	yes	yes	1981														
2400	$13,995	10-95	40	S	P	no	yes	1964														
2600	$1795	1-2	12	S	P	no	yes	1978														
2830	$3595	1-5	18	S	P	no	yes	1982														
1035	$4995	3+	20	S	P	yes	yes	1983														
3100	$2495	1-15	20	S	P	no	yes	1973														
3100LDC	$2495	1-5	20	S	P	no	yes	1974														
3107	$3995	1-15	20	S	P	yes	yes	1976														
3109	$3995	6-15	26	S	P	yes	yes	1978														
3300-II	$2995	1.5-6	23	S	P	no	yes	1979														
3400	$6995	8-25	26	S	P	no	yes	1977														
3450	$7995	8-25	30	S	P	yes	yes	1979														
3600-I	$17,995	5-75	60	S	P	no	yes	1968														
4000	$7495	5-75	45	S	P	no	yes	1970														
4500	$12995	5-75	45	S	P	no	yes	1973														
5400	$16,995	15-50	45	S	P	no	yes	1977														
5600	$30,600	30-75	45	S	P	no	yes	1979														
7000	$20,995	25-125	60	S	P	yes	yes	1969														
8200	$60,275	25-125	70	S	P	yes	yes	1979														
9200	$59,200	100+	120	S	P	yes	yes	1974														
9400	$119,725	100+	120	S	P	yes	yes	1977														
9500	$129,775	100+	120	S	P	no	yes	1979														
Yorktown Industries, Inc. (Circle number 77)																						
600	$895	2.5	10	R	C	no	yes	1981		1950	Copiers			x		1000	3	yes		x		
700	$1495	2.5	8	S	P	no	yes	1981														

[1] Dealer option [2] To be announced

A.B. Dick Co.
5700 W. Touhy Avenue
Chicago IL 60648
312-793-1900

Adler-Royal Business Machines, Inc.
1600 Route #22
Union NJ 07083
201-964-3200

Canon USA, Inc.
Copier Products Div.
1 Canon Plaza
Lake Success NY 11042
516-488-6700

Docutel Olivetti Corp.
155 White Plains Road
Tarrytown NY 10591
914-631-8100

Facit, Inc.
Office Systems Div.
501 Winsor Drive
Secaucus NJ 07094
201-866-5111

Gestetner Corp.
Gestetner Park
Yonkers NY 10703
914-968-6666

Minolta
101 Williams Drive
Ramsey NJ 07746
201-825-4000

Mita Copystar America, Inc.
777 Terrace Avenue
Hasbrouck Heights NJ 07604
201-288-6900

Monroe Systems for Business
The American Road
Morris Plains NJ 07950
201-993-2304

N.B.S. Roneo
1 Alsan Way
Little Ferry NJ 07643
201-440-5670

Olympia USA Inc.
P. O. Box 22
Somerville NJ 08876
201-722-7000

Panasonic
1 Panasonic Way
Secaucus NJ 07094
201-348-5392

Pitney Bowes
Wheeler Jr. Drive
Stamford CT 06926
203-356-5000

Ricoh of America Inc.
20 Gloria Lane
Fairfield NJ 07006
201-575-9550

Royal Business Machines, Inc.
500 Day Hill Road
Windsor CT 06095
203-683-2[illegible]22

Sanyo
51 Joseph Street
Moonachie NJ 07074
201-440-9300

Savin Corporation
Columbus Avenue
Valhalla NY 10595
914-769-9500

Sharp Electronics Corporation
10 Sharp Plaza
Paramus NJ 07652
201-265-5600

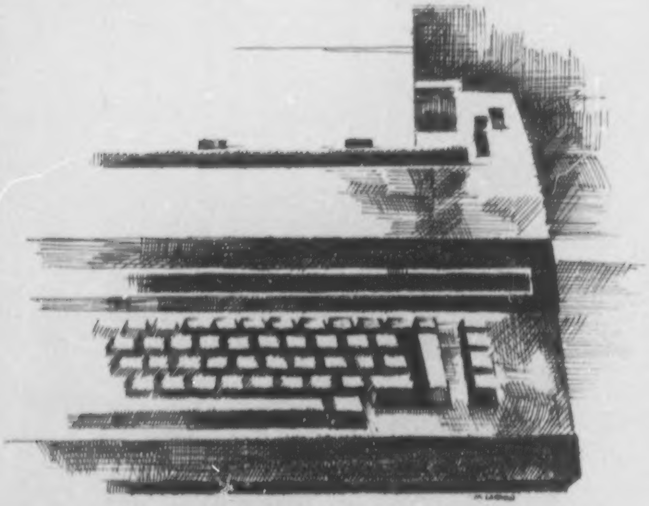
3M
Copier Products Div.
3M Center
St. Paul MN 55144
612-733-1110

Toshiba America, Inc.
Business Equipment Div.
2441 Michelle Drive
Tustin CA 92680
714-730-5000

Van Dyk Research Corp.
45 S. Jefferson Road
Whippany NJ 07981
800-631-8116

Yorktown Industries, Inc.
330 Factory
Addison IL 60101
312-543-6110

Xerox Corporation
Business Systems
Xerox Square
Rochester NY 14644
716-427-5400



Electronic typewriters

Activity in the electronic typewriter marketplace continues at a rapid pace. New and upgraded model introductions are common, and a few new manufacturers have entered the market recently.

Many models now offer the options of expanded external memories and communicating devices, further increasing the overlap between typewriters and dedicated word-processing systems. Thus, buyers looking at high-end typewriters or low-end word processors will need to look carefully.

The data presented here, provided by typewriter manufacturers, will be useful in making an initial investigation of potential sources by giving you a quick overview of each manufacturer's product line and sales and service support profiles. While any chart of this nature is inadequate for making a buying decision, it will help you determine which companies offer the kind of product and buying situation you are interested in.

Blanks and dashes appearing in the chart indicate that the information was not provided or that the information did not fall within the specific feature listed. The notation "na" means "not available" or "not applicable."

Although extensive efforts have been made to ensure the completeness and accuracy of these charts, *PurchasingWorld* cannot be held liable for omissions or errors.

Product profile												Company profile			Sales profile					Service profile					
Manufacturer & model	Mfr's suggested price	10-pitch spacing	12-pitch spacing	Proportional spacing	Other spacing	Max paper width (in.)	Display (characters)	Correction memory (characters)	Internal memory (characters)	External memory	Year introduced	Annual sales (millions)	Year founded	Primary business	Mfr-direct sales	Mfr-owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr-direct service	Mfr-authorized service	Other service	Number of service locations

Adler-Royal Business Machines (Circle number 81)																					
Satellite II	$475	x	x			13		20		opt		$120+	1898	Office machines		x	2000	3	[11]	x	2000
1005	$960	x	x			16.5		132		opt											
1011	$1175	x	x	x	x	16.5		730	2.6K	opt	1982										
1030 8K	$1575	x	x	x	x	16.5		4K	8K	opt	1981										
1030 16K	$1825	x	x	x	x	16.5		4K	16K	opt	1981										
1040 16K	$2395	x	x	x	x	16.5	40	4K	16K	opt	1982										
1041 16K	$3595	x	x	x	x	16.5	40	4K	16K	std	1983										
Brother International Corp. (Circle number 82)																					
Correctronic 40	$480	x	x		x	13.5		16			1983		1954	Typewriters	x	x		3	yes	x	
Correctronic 50	$530	x	x		x	13.5		[1]			1983										
Compactronic 60	$600	x	x		x	13.5		[1]			1983										
Executron 65	$600	x	x		x	13.5		[1]			1983										
Executron 70	$800	x	x	x	x	13.5	20	500	8K	opt	1983										
EM-100	$1290	x	x	x	x	16.5	16	500	8K	opt	1983										
EM-200	$1890	x	x	x	x	16.5	16	500	8K	opt	1983										
Canon U.S.A., Inc. (Circle number 83)																					
AP500	$1695	x	x	x	15	16½	20	500	32K	opt	1981	$800	1956	Office & photo equipment		x	500	3	yes	x	500
AP400	$1095	x	x	x	15	16½	—	500	—	—	1981										
AP350	$945	x	x	—	15	16½	15	350	2K	opt	1983										
AP300	$795	x	x	—	15	16½	15	300	—	—	1983										
AP250	$695	x	x	—	15	16½	—	350	—	—	1983										
Docutel/Olivetti (Circle number 84)																					
ET 111	$895	x	x	x	x	17	—	500	—	na	1983										
ET 115D		x	x	x	x	21	24	500	1.8K	na	1983										
ET 225 Basic	$1395	x	x	x	x	17	26	500	620	na	1982										
ET 225 101	$1695	x	x	x	x	17	26	500	5K	na	1982										
ET 225 202[8]	$1980	x	x	x	x	17	26	500	8K[8]	na	1982										
ET 351 single drive	$3185	x	x	x	x	17	40	[6]	1K	std	1981										
ET 351 dual drive	$3485	x	x	x	x	17	40	[6]	1K	std	1981										
ETV 300 (16K)	$1695	x	x	x	x	17	[9]	—	16K	na	1983										
ETV 300 (32K)	$1995	x	x	x	x	17	[9]	—	32K	na	1983										
ETV 300 single drive	$2695	x	x	x	x	17	[9]	—	—	std	1983										
ETV 300 dual drive	$3015	x	x	x	x	17	[9]	—	—	std	1983										
Exxon Office Systems (Circle number 85)																					
210 Intelligent Typewriter	$950	x	x	x	x	17	—	500	—	na	1983										
140 Intelligent Typewriter	$5445	x	x	x	—	15¼	24	[1]	[2]	std	1978										
120 Intelligent Typewriter	$2845	x	x	x	—	15¼	24	[1]	[3]	opt	1978										
Facit Inc. (Circle number 86)																					
8121	$2695	x	x	x	x	19¼	40	500	40K	opt	1983		1938	Office systems	x		860	[11]		x	6
8111	$2195	x	x	x	x	19¼	40	500	18K	opt	1983										
8110	$1785	x	x	x	x	19¼	40	350	6K	na	1982										
8101	$1545	x	x	x	x	19¼	40	350	2K	na	1983										
8100	$1385	x	x	x	x	19¼	40	300	1K	na	1981										
8105KSR	$1495	x	x	x	x	19¼	—	1000	3K	na	1982										
8001	$1145	x	x	x	x	19¼	—	330	—	na	1983										
8000	$985	x	x	x	x	19¼	—	150	—	na	1981										
1885	$1495	x	x	x	x	16½	—	250	5K	na	1980										
7800	$545	x	x	—	—	13	—	10	—	na	1983										
Hermes Products, Inc. (Circle number 87)																					
16	$425	x	x	—	—	13½	—	10	—	—	1983	—	1922	Office machines		x		12	no	x	
21 Level 1	$1095	x	x	—	x	—	—	—	—	—	1982										

Product profile												Company profile			Sales profile					Service profile					
Manufacturer & model	Mfr's suggested price	10-pitch spacing	12-pitch spacing	Proportional spacing	Other spacing	Max paper width (in.)	Display (characters)	Correction memory (characters)	Internal memory (characters)	External memory	Year introduced	Annual sales (millions)	Year founded	Primary business	Mfr-direct sales	Mfr-owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr-direct service	Mfr-authorized service	Other service	Number of service locations
21 Level 2	$2445	x	x	—	x	—	—	—	—	—	1983														
42	$1795	x	x	x	x	17	20	222	16K	—	1981														
51 Level 1	$2145	x	x	x	x	17	20	222	32K	opt	1982														
51 Level 2	$2295	x	x	x	x	17	20	222	32K	opt	1982														
51 Level 3	$2845	x	x	x	x	17	20	222	32K	std	1982														
51 Level 4	$2995	x	x	x	x	17	20	222	32K	std	1982														
51 Level 5	$3595	x	x	x	x	17	20	222	32K	opt	1983														
51 Level 6	$4695	x	x	x	x	17	20	222	32K	std	1983														
IBM Corp. (Circle number 88)																									
Model 50		x	x	x		19	—	[1]	—	na															
Model 60		x	x	x		15½	—	[1]	736	na															
Model 75		x	x	x		19	—	[1]	15.5K	na															
Olympia USA Inc. (Circle number 89)																									
ES 100 SC	$899	x	x	—	—	13¼	—	8	—	na	1983	—	1906	Office equipment	x			x	1200	3	yes			x	1200
Standard	$999	x	x	—	x	17¼	—	213	—	na	1983														
Professional	$1249	x	x	x	x	17¼	—	—	4K	opt	1983														
Supertype 2	$1899	x	x	x	x	17¼	—	500	16K	opt	1983														
Disque	$2499	x	x	x	x	17¼	—	256	16K	std	1983														
Panasonic (Circle number 90)																									
KX-E701	$995	x	x	x	x	15	—	500	1K	na	1983			Electronic equipment			x			6		x	x		
KX-E708	$1495	x	x	x	x	15	40	500	8K	opt	1983														
Royal Div., Adler-Royal Business Machines (Circle number 91)																									
Satellite II	$475	x	x			13		20		opt		$120+	1898	Office machines				x	2000	3	"		x		2000
5005	$960	x	x			16.5		132		opt															
5011	$1175	x	x	x	x	16.5		730	2.6K	opt	1982														
5030 8K	$1575	x	x	x	x	16.5		4K	8K	opt	1981														
5030 16K	$1825	x	x	x	x	16.5		4K	16K	opt	1981														
5040 16K	$2395	x	x	x	x	16.5	40	4K	16K	opt	1982														
5041 16K	$3595	x	x	x	x	16.5	40	4K	16K	std	1983														
Sharp Electronics Corp. (Circle number 92)																									
Sharpwriter ZX-400	$895	x	x	x	x	17	—	200	—	—	1982	$700	1962	Electronic products				x	350	3			x		350
Sharpwriter ZX-410	<$1000	x	x	x	x	17	—	450	—	—	1983														
Sharpwriter ZX-500	$1295	x	x	x	x	17	—	400	[4]	—	1982														
Silver-Reed America, Inc. (Circle number 93)																									
Penman	$449	x	x			12		16			1982		1977	Typewriters			x	x	1500	3	no		x		1500
Penman Deluxe	$589	x	x		x	12		16			1982														
EX50	$830	x	x			17		[1]			1983														
EX55	$1095	x	x	x	x	17		[5]			1981														
EX55M	$1370	x	x	x	x	17		[5]	7.6K		1983														
EX77	$1995	x	x	x	x	17	32	[5]	19K	opt	1983														
EX77E	$2415	x	x	x	x	17	32	[5]	23K	opt	1983														
EX77FD	$3295	x	x	x	x	17	32	[5]	19K	std	1983														

Product profile												Company profile			Sales profile					Service profile					
Manufacturer & model	Mfr's suggested price	10-pitch spacing	12-pitch spacing	Proportional spacing	Other spacing	Max paper width (in.)	Display (characters)	Correction memory (characters)	Internal memory (characters)	External memory	Year introduced	Annual sales (millions)	Year founded	Primary business	Mfr-direct sales	Mfr-owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr-direct service	Mfr-authorized service	Other service	Number of service locations
Swintek Corporation (Circle number 97)																									
1146 CM	$649	x	x		x	12	100	46	na	na	1982		1974	Office equipment				x					x		7
Syntrex Inc. (Circle number 94)																									
Aries	$1390	x	x	—	x	17	—	[1]	—	opt	1980	$30	1979	Office automation	x		x			3	yes	x	x		50
Libra	$2595	x	x	x	x	17	[10]	4K	40K	opt	1982														
3M (Circle number 95)																									
200	$1195	x	x		x	17	—	[1]	na	na			1902		x			x			yes				
400	$1795	x	x	x	x	17	20	[5]	—	na															
450I	$1994	x	x	x	x	17	26	560	5K	5K															
600	$2795	x	x	x	x	17	20	[5]	16K	na															
800	$4795	x	x	x	x	17	40	[4]	—	73K															
900[6]	$3395	x	x	x	x	17	40	[5]	[7]	[7]															
Xerox Corp. (Circle number 96)																									
Memorywriter 610	$1195	x	x	x	x	15	—	250	946	na	1981		1906	Information systems	x			x	250		yes	x			200
Memorywriter 615	$1395	x	x	x	x	15	—	180	5450	na	1981														
Memorywriter 620	$2150	x	x	x	x	15	20	180	9260	na	1981														
Memorywriter 625	$2450	x	x	x	x	15	20	180	19K	na	1981														
Memorywriter 627	$2750	x	x	x	x	15	20	180	31K	na	1982														
Memorywriter 630	$4200	x	x	x	x	15	20	180	138K	na	1983														

[1] One line [2] Up to 30 pages [3] Up to 5 pages [4] 1K expandable to 17K [5] Two lines [6] Requires modified 3M 200 typewriter at $1699 [7] Disk [8] Upgradable to 32K internal memory [9] Twenty-four lines [10] 80 characters x 25 lines on separate screen [11] Dealer option

Adler-Royal Business Machines, Inc.
1800 Route 22, P. O. Box 1597
Union NJ 07083
201-964-3200

Brother International Corp.
8 Corporate Place
Piscataway NJ 08854
201-931-0300

Canon U.S.A., Inc.
One Canon Plaza
Lake Success NY 11042
516-488-6700

Contronix
3848 Marquis
Garland TX 75042
214-276-0555

Docutel/Olivetti
106 Decker Court Ste. 300
Irving TX 75062
214-258-8610

Exxon Office Systems
777 Long Ridge Road
Stamford CT 06902
203-329-5000

Facit Inc.
235 Main Dunstable Rd.
Nashua NH 03061
603-883-4151

Hermes Products, Inc.
1900 Lower Road
Linden NJ 07036
201-574-0300

IBM Corp.
900 King Street
Rye Brook NY 10573
914-934-4000

Olympia USA Inc.
Box 22
Somerville NJ 08876
201-722-7000

Panasonic
One Panasonic Way
Secaucus NJ 07094
201-348-6399

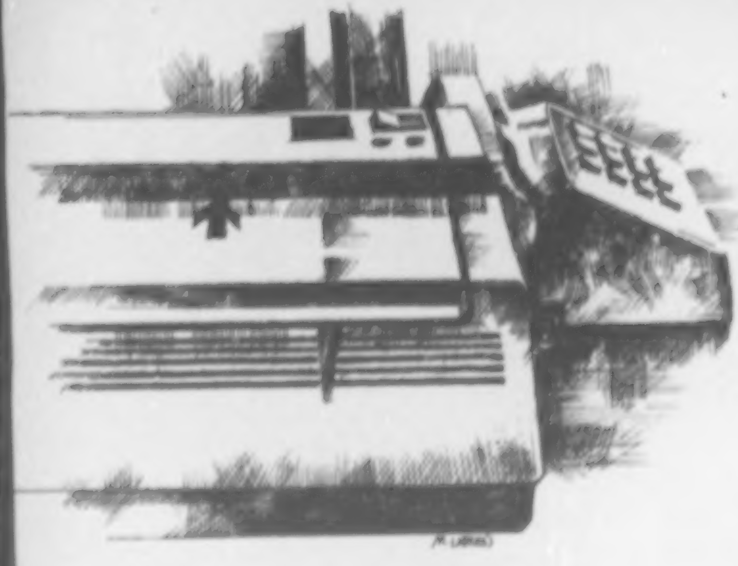
Sharp Electronics Corp.
10 Sharp Plaza
Paramus NJ 07652
201-265-5600

Silver-Reed America, Inc.
19600 S. Vermont Avenue
Torrance CA 90502
213-516-7008

Syntrex Inc.
246 Industrial Way West
Eatontown NJ 07724
201-542-1500

3M
3M Center
St. Paul MN 55144
612-733-1110

Xerox Corp.
Xerox Square
Rochester NY 14644
716-427-5400



Facsimile equipment

Observers of the facsimile equipment market today generally fall into two categories: those who believe that the need for specific equipment to transmit facsimiles is strong and still growing, and those who believe that the function of transmitting facsimiles will be taken over by sophisticated copiers and word processing equipment.

Judging from the research completed in the preparation of this chart, the outlook of the former group is the more accurate one.

New models continue to be introduced, and usage continues to grow. (In fact, one package express company recently announced what is believed to be the world's largest facsimile transmission network.)

As demonstrated by this chart, the number of players in the facsimile equipment market is rather limited. Nevertheless, it is useful to have a comprehensive reference of the equipment available and the companies behind them. When the need arises, this listing can save you hours of research time.

Blanks and dashes appearing in the chart indicate that the information was not provided or that the information did not fall within the specific feature listed. The notation "na" means "not available" or "not applicable."

Although extensive efforts have been made to ensure the completeness and accuracy of these charts, *PurchasingWorld* cannot be held liable for omissions or errors.

Product profile													Company profile			Sales profile					Service profile					
Manufacturer & model	Mfr's suggested price	Transceiver	Receiver	Transmitter	Analog signal	Digital signal	Thermal (T) or coated (C)	Max paper size (in.)	Automatic document feed	Transmission speed for 8½ x 11 page	Compatibility group	Year introduced	Annual sales (millions)	Year founded	Primary business	Mfr/direct sales	Mfr/owned outlets	Distributors	Dealers	Number of sales locations	Warranty period (months)	Mfr service contracts	Mfr/direct service	Mfr/authorized service	Other service	Number of service locations
Aiden Electronics, Inc. (Circle number 200)																										
Aiden 18 x 22 System	$11,750	x	x		x		T	18 x 22	na	4m	I	1978				x		x		10	12	yes	x	x		400
Aiden Signa Fax	$6100	x	x		x		T	4 x 6	na	—	I	1976				x		x		10	12	yes	x	x		400
Canon U.S.A., Inc. (Circle number 201)																										
Cannon Fax 401	$5995			x	x	x	T	11 x any	opt	35s	II/III	1982	$2331	1937	Photo equipment & office machines	x	x	x		>100	3	yes	x	x		>100
Cannon Fax 31	$1995			x	x		T	8½ x 25	std	3m	I/II	1983														
Exxon Office Systems Co. (Circle number 202)																										
2310 Qwip	$5845	x	x	x		x	T	8½ x any	std	40s	III	1982		1976	Office automation	x	x	x		110	3	yes	x			560

PURCHASING SALARIES

"Second 500" and smaller firms

Lea Tonkin, senior editor

Rapid-fire pay gains are rewarding many purchasing pros for top performance. But the salary picture also includes frozen and reduced salaries for fellow practitioners.

You can find out how your pay and projected gains compare to others' in the field by checking average figures reported here. (See Fig. 1 for current compensation averages.) Our update is based on a recent ***PurchasingWorld*** survey of the second 500 largest U.S. industrial firms and a second sampling of pay levels at smaller industrial companies. ***PW*** reported on purchasing salaries in the top 500 U.S. industrial firms in the September 1983 issue.

Comparing gains

Although average reported salary increases for many buyers have fallen back sharply from gains reported in ***PW***'s 1981 compensation study, inflation's nosedive softens the impact. Federal government price-watchers note that consumer prices climbed less than 11% for the recent two-year period. Compare this rate to greased-lightning gains of approximately 25% for the previous two-year period.

Whether you're planning to use ***PW***'s salary report to monitor your own progress or map out plans for department budgets, these figures will provide a useful yardstick. These projections were gathered in two recent reader surveys. For the survey of the second 500 largest industrial firms, a 17% response rate was recorded; the survey of 500 companies with lower gross sales netted a 16% response.

Performance pays dividends

Results count, say surveyed purchasing executives of pay policy. Asked to rank factors that determine salaries, 74.7% of the "second 500" PMs point to performance as the primary indicator. Experience, education, and seniority rated second, third, and fourth in importance, respectively. And in the survey of executives at smaller firms, rankings followed in the same order.

"Performance is most important," notes Paul E. Locker, director of corporate purchasing at The Reynolds & Reynolds Co. in Dayton, OH. "Aggressive, knowledgeable" purchasing staff members' top performance may result in raises more than once a year, Locker says. A value engineering program and related cost control results, as well as individual workload volume, are among related considerations.

Performance, followed by experience, are the best yardsticks when individual staff members' pay increases are planned, says P. James Brady. He is manager of materials for General Instrument Corp.'s Computer Products Division in El Paso, TX. For performance measurement, he looks to "cost reduction as number one, followed by the quality of the suppliers they (staff members) have picked." He also values "a sense of urgency." Getting parts in on time and taking initiative to work out problems are important, Brady says.

Education and salary

Differences among the two survey groups showed up in their opinions of educational achievements that affect purchasing salaries. In the "second 500" group, for example, purchasing executives noted consideration of various degrees as follows: bachelors degree other than engineering, 36.8%; Certified Purchasing Manager (C.P.M.), 34.5%; engineering degree, 18.4%; and M.B.A., 27.6%. Comparable percentages reported by respondents from smaller firms were 21.5%; 29.1%; 10.1%; and 16.5%.

Few survey participants noted the importance of masters degrees other than an M.B.A., a doctorate, or other degrees. Forty-six percent of both groups say that education does not affect purchasing pay.

Staffers who earn the C.P.M. designation can expect a 1-5% boost in their salaries, according to 21.8% of the "second 500" respondents and 15.2% of the PMs at smaller firms. Other percentage advantages for C.P.M. personnel for the two groups, respectively, are: 6-10%, 12.6% and 7.6%; 11-15%, 2.3% and 3.8%; more than 15%, none and 2.5%; and no effect was seen by 39.1% and 35.4%.

"C.P.M. is not recognized by the outside world," comments one purchasing executive. Another adds, "C.P.M. still does not carry weight, but I expect this to change over time with recognition."

Increases vary significantly

A look at percentage gains for purchasing and materials management pay compared to salary levels reported two years earlier reveals that some staffers are leapfrogging ahead at a much faster pace than others. For example, low and high reported salaries for senior buyers at "second 500" companies were 7.5% and 8.8% higher than the 1981 averages, respectively. But materials managers' pay gained 26.9% and 23.4%, respectively, in the same period. The smaller firms were not surveyed in 1981.

Among other percentage gains for the recent two-year period: Purchasing directors' average reported low and high salaries gained 16.0% and 20.2%, respectively. For materials directors, 55.5% and 28.3% increases were reported. Meanwhile, purchasing managers' compensation rose an average 24.6% and 9.4%.

Also, purchasing agents' pay showed an average two-year increase of 8.6 and 9.6%, respectively. Comparable gains for buyers averaged 12.3% and 9.1% as pay boosts for junior buyers averaged 11.5% and 10.1%. Compensation upswings reached 28.8% and 24.0% for expeditors, and the gains amounted to 18.2% and 6.5% for trainees in the same period.

Impact of size, location, business

In contrast to ***PW***'s findings for the nation's top 500 industrial firms, purchasing pros employed at "second 500" and smaller firms find that bigger isn't always better when paychecks are handed out (see Fig. 2). A senior buyer who joins a company in the "up to $100 million" category for smaller firms, for example, earns top dollar when pay averages are compared to senior buyers' earnings at larger firms.

Don't look to company location as the best measure of purchasing pay trends: Figures vary all over the map. (Fig. 3 has survey-related findings.) But many purchasing pros in the "second 500" group who are from northeast states report higher salaries than their counterparts in other regions. Among smaller firms, many top pay averages are noted for employees in western states.

Wide variations in purchasing pay averages are noted from one industry to the next, as shown in Fig. 4. But no single industry claims consistently higher-paid buyers.

Fringe benefits

Nonsalary compensation represents 1-10% of total purchasing compensation at 29.9% of the "second 500" firms and 30.4% of the smaller companies surveyed. Compensation other than salary climbs to the 11-20% range at 12.6% and 10.1% of the reporting firms, respectively. Other percentage ranges: 21-30% at 8.0% and 6.3%; and 31% or higher for 6.9% and 1.3%, respectively.

Profit sharing and other benefits can offset a slowdown in salary increases, comments Ivan "Stu" Stewart, purchasing manager at D.L. Martin Machine Co., Mercersberg, PA. He adds, "Profit sharing can show that the company appreciates their [employees'] efforts, and it gives an incentive to help the company make a profit." Buyer performance—including initiative in working with vendors on price, quality, and delivery improvements and other factors—boosts profit sharing gains, Stewart says.

For "second 500" companies, incentive awards are the most popular form of nonsalary compensation noted by survey participants (21.8%). Stock options were reported by 14.9% of the sample, and "other" was noted by 19.5%. But 52.9% of the group said no compensation other than salary is provided.

In smaller firms, incentive awards and stock options are reported by 13.9% and 3.8% of the survey group, respectively. Other forms of nonsalary compensation are noted by 17.7%, and "none" is reported by 63.3% of the respondents.

How purchasing fares

When purchasing salaries are compared to pay levels in other departments, the results look good. Purchasing is the same as other functions, report 80.5% of the second 500 group and 62.0% of the smaller firms. "Better" standing is noted by 8.0% and 11.4%, respectively. And "worse" responses were turned in by 1.1% and 3.8% of the respondents, respectively.

More than 80% of both survey groups reported annual salary increases. Few respondents noted salary reviews at six-month or other intervals. A number of purchasing executives said that they're affected by pay freeze/cutbacks lasting up to two years. ***PW***

Editor's note: A 100-page reprint featuring this article, last month's coverage of purchasing salaries in the nation's top 500 industrial firms, and many additional salary tables will be available from ***PW***'s reprint department in the near future.

Fig. 1—Purchasing pay: How does yours compare?

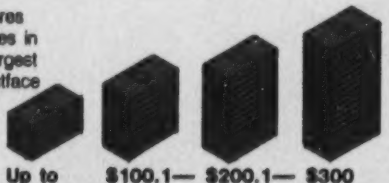
	2nd 500 companies	Other companies
VP Purchasing	$32,000	$40,000
	$39,000—$53,333	$41,000—$42,000
	$72,000	$42,000
VP Materials	$42,000	—
	$56,200—$64,200	—
	$75,000	—
Purch. director	$25,000	$20,000
	$39,781—$55,271	$32,114—$38,185
	$80,000	$54,080
Materials director	$29,000	$40,000
	$54,384—$64,472	$40,000
	$150,000	$40,000
Purch. manager	$19,000	$14,000
	$32,622—$43,503	$28,619—$34,633
	$67,920	$55,000
Materials manager	$30,000	$15,000
	$36,367—$64,122	$26,898—$33,621
	$90,000	$47,000
Purchasing agent	$13,000	$15,000
	$24,612—$33,566	$21,693—$26,439
	$48,400	$38,000
Senior buyer	$11,000	$10,400
	$22,222—$30,885	$22,249—$26,099
	$55,000	$37,000
Buyer	$10,400	$8320
	$18,835—$25,366	$16,529—$20,657
	$50,000	$32,000
Junior buyer	$8424	$8000
	$15,147—$20,197	$13,599—$16,566
	$30,000	$22,000
Expeditor	$8500	$7000
	$14,937—$19,182	$13,652—$16,673
	$28,000	$25,000
Trainee	$8000	$7000
	$12,074—$14,437	$10,162—$12,648
	$21,000	$22,200

Highest reported salary
1983 averages—low and high reported salaries
Lowest reported salary

Fig. 2—Company size and purchasing pay*

Annual gross sales (corporate or largest division/subsidiary)

Key: Boldface figures represent companies in the second 500 largest industrials list. Lightface figures represent other companies.



	Up to $100 million	$100.1—$200 million	$200.1—$299.9 million	$300 million and over
VP purchasing	**$32,000** **$45,000** $42,000 $42,000	— — $40,000 $40,000	— — — —	**$42,500** **$57,500** — —
VP materials	**$55,000** **$65,000** — —	**$65,000** **$73,000** — —	**$42,000** **$58,000** — —	**$44,000** **$50,000** — —
Purch. director	**$36,513** **$48,844** — —	**$40,418** **$57,958** $25,167 $27,667	**$38,627** **$52,088** $33,800 $38,000	**$43,341** **$61,787** $34,897 $42,900
Matls. director	— — — —	**$79,153** **$94,750** — —	**$37,333** **$42,000** $40,000 $40,000	**$44,000** **$59,000** — —
Purch. manager	**$32,396** **$38,855** $24,700 $30,300	**$33,987** **$46,615** $17,000 $19,333	**$27,712** **$38,182** $36,360 $40,292	**$34,856** **$47,431** $29,586 $37,516
Matls. manager	**$35,000** **$48,750** $20,000 $22,000	**$40,000** **$76,050** $24,460 $31,210	— — $33,750 $41,150	**$40,000** **$45,000** $34,333 $39,333
Purch. agent	**$24,468** **$33,691** $19,857 $24,143	**$23,414** **$31,634** $18,875 $27,000	**$25,707** **$36,550** $26,771 $28,614	**$25,845** **$34,970** $20,250 $26,777
Senior buyer	**$21,631** **$30,067** $23,667 $27,333	**$22,615** **$32,644** $17,333 $20,667	**$19,977** **$28,745** $22,180 $25,871	**$23,882** **$32,019** $23,001 $26,887
Buyer	**$17,660** **$23,444** $15,200 $18,943	**$19,191** **$26,518** $13,708 $18,034	**$17,719** **$25,800** $19,865 $24,155	**$20,198** **$26,620** $17,011 $21,117
Junior buyer	**$15,434** **$19,909** $8000 $10,000	**$15,093** **$19,223** $10,800 $12,500	**$15,465** **$21,100** $14,719 $18,067	**$14,797** **$21,321** $15,462 $18,995
Expeditor	**$13,711** **$18,299** $7000 $9500	**$14,533** **$20,592** $8640 $10,920	**$15,050** **$21,400** $13,204 $16,006	**$16,431** **$18,233** $15,040 $18,770
Trainee	**$9361** **$12,164** $8180 $9750	**$14,000** **$16,000** $8254 $10,544	**$14,000** **$16,750** — —	**$15,600** **$17,067** $12,293 $14,930

*Averages of low and high figures in salary ranges

Fig. 3—Location and pay breakdowns*

Key: Boldface figures represent companies in the second 500 largest industrials list. Lightface figures represent other companies.

	North-east	North Central	South	West
VP purchasing	— — — —	[illegible] **$53,333** — —	[illegible] — — —	[illegible] — $41,000 $42,000
VP materials	— — — —	**$61,333** **$66,000** — —	**$48,500** **$61,500** — —	— — [illegible] —
Purch. director	**$45,384** **$60,954** $25,000 $40,000	**$36,913** **$52,080** $29,853 $35,916	**$37,213** **$51,720** $33,167 $35,667	**$35,000** **[illegible]** [illegible] [illegible]
Matls. director	**$43,730** **$57,125** — —	**$60,667** **$67,667** — —	**$38,000** **$40,000** — —	— — $40,000 [illegible]
Purch. manager	**$35,496** **$47,792** $28,250 $35,915	**$29,563** **$41,341** $29,567 $35,822	**$33,893** **$42,985** $22,883 $28,117	**[illegible]** **$37,000** [illegible] [illegible]
Matls. manager	**$40,000** **$66,667** $21,500 $28,750	**$38,000** **$49,420** $27,973 $34,141	**$30,000** **$40,000** $29,167 $35,767	— — [illegible] [illegible]
Purch. agent	**$26,426** **$35,925** $23,125 $28,048	**$24,224** **$34,482** $21,250 $26,014	**$23,404** **$30,096** $20,280 $23,660	**[illegible]** **[illegible]** [illegible] [illegible]
Senior buyer	**$23,364** **$33,921** $23,184 $25,317	**$22,198** **$30,375** $23,500 $27,727	**$20,392** **$28,712** $17,640 $21,480	**$22,077** **[illegible]** $22,701 [illegible]
Buyer	**$20,631** **$27,590** $13,650 $17,027	**$18,316** **$24,776** $18,391 $23,151	**$17,400** **$23,128** $11,653 $16,530	**$17,108** **[illegible]** [illegible] [illegible]
Junior buyer	**$15,242** **$19,666** $14,653 $17,651	**$15,198** **$20,206** $12,730 $16,150	**$14,678** **$19,819** $12,233 $14,930	**[illegible]** **[illegible]** [illegible] [illegible]
Expeditor	**$14,889** **$18,811** $11,686 $14,885	**$14,694** **$20,182** $15,189 $18,311	**$14,150** **$16,107** $11,350 $13,950	**[illegible]** **[illegible]** [illegible] [illegible]
Trainee	**$14,600** **$16,100** $8008 $10,294	**$10,611** **$13,624** $11,275 $16,225	**$11,833** **$13,767** $7280 $8320	[illegible] [illegible] [illegible] [illegible]

*Averages of low and high reported figures in salary ranges

Fig. 4—Purchasing salaries and industry type

Key: Boldface figures represent companies in the second 500 largest industrial list. Lightface figures represent other companies.

		Food, tobacco, related products	Transportation	Energy	Textile mill, apparel, leather	Metal service centers	Lumber, wood products, furn., fixt.	Paper, related products	Printing, publish.
VP purchasing	**Ave low**	—	—	—	—	—	—	**$37,000**	**$48,000**
	Ave high	—	—	—	—	—	—	**$43,000**	**$72,000**
	Ave low	—	—	—	—	—	$40,000	—	—
	Ave high	—	—	—	—	—	$40,000	—	—
VP materials	**Ave low**	—	—	**$55,000**	**$42,000**	—	—	**$44,000**	—
	Ave high	—	—	**$65,000**	**$58,000**	—	—	**$50,000**	—
	Ave low	—	—	—	—	—	—	—	—
	Ave high	—	—	—	—	—	—	—	—
Purchasing director	**Ave low**	**$43,750**	—	**$65,000**	**$30,046**	—	**$30,000**	**$33,560**	**$36,200**
	Ave high	**$60,167**	—	**$80,000**	**$53,425**	—	**$42,000**	**$49,570**	**$45,300**
	Ave low	$27,933	—	—	$30,000	—	$40,000	$34,500	—
	Ave high	$36,107	—	—	$36,667	—	$40,000	$37,300	—
Materials director	**Ave low**	—	—	—	—	—	—	**$43,000**	—
	Ave high	—	—	—	—	—	—	**$48,000**	—
	Ave low	—	—	—	$40,000	—	—	—	—
	Ave high	—	—	—	$40,000	—	—	—	—
Purchasing manager	**Ave low**	**$34,077**	**$26,000**	**$47,973**	**$23,467**	—	**$27,600**	**$26,760**	**$34,900**
	Ave high	**$44,198**	**$45,000**	**$54,973**	**$32,608**	—	**$30,000**	**$38,860**	**$43,433**
	Ave low	$41,000	—	$22,000	—	$35,000	—	—	$30,000
	Ave high	$47,950	—	$22,000	—	$42,000	—	—	$40,000
Materials manager	**Ave low**	—	—	**$35,000**	—	—	—	**$40,000**	—
	Ave high	—	—	**$45,000**	—	—	—	**$45,000**	—
	Ave low	$27,000	—	—	$24,000	—	—	—	$15,000
	Ave high	$32,000	—	—	$30,000	—	—	—	$15,000
Purchasing agent	**Ave low**	**$23,750**	**$22,000**	**$31,520**	**$20,500**	—	**$16,200**	**$25,747**	**$19,400**
	Ave high	**$31,334**	**$25,000**	**$35,880**	**$28,375**	—	**$23,700**	**$36,033**	**$25,250**
	Ave low	$25,250	—	—	$20,333	$31,240	$30,000	$21,250	$28,000
	Ave high	$30,650	—	—	$21,667	$31,240	$30,000	$27,500	$28,000
Senior buyer	**Ave low**	**$21,337**	**$19,000**	**$20,000**	**$17,309**	—	—	**$21,644**	**$21,600**
	Ave high	**$28,255**	**$22,000**	**$24,000**	**$23,267**	—	—	**$30,685**	**$30,200**
	Ave low	—	—	—	$20,000	—	—	$19,000	$16,000
	Ave high	—	—	—	$22,000	—	—	$22,000	$19,000
Buyer	**Ave low**	**$19,466**	**$17,000**	**$24,253**	**$15,025**	—	**$12,000**	**$18,132**	**$22,667**
	Ave high	**$26,200**	**$19,000**	**$28,853**	**$20,374**	—	**$14,400**	**$25,460**	**$25,067**
	Ave low	$18,700	—	—	—	$18,500	—	$12,800	$17,735
	Ave high	$24,233	—	—	—	$21,320	—	$14,000	$18,735
Junior buyer	**Ave low**	**$16,145**	**$16,000**	—	**$12,256**	—	**$16,800**	**$15,322**	**$12,000**
	Ave high	**$20,609**	**$18,000**	—	**$17,072**	—	**$24,000**	**$20,288**	**$12,000**
	Ave low	$13,750	—	$10,000	$13,000	—	—	—	$8750
	Ave high	$15,750	—	$12,000	$16,000	—	—	—	$10,000
Expeditor	**Ave low**	—	—	**$16,267**	**$8500**	—	—	—	**$17,950**
	Ave high	—	—	**$19,493**	**$11,000**	—	—	—	**$19,800**
	Ave low	$17,560	—	—	—	$15,000	—	—	$7000
	Ave high	$22,340	—	—	—	$18,000	—	—	$9500
Trainee	**Ave low**	—	—	**$12,000**	**$10,000**	—	—	—	**$20,800**
	Ave high	—	—	**$14,000**	**$12,500**	—	—	—	**$20,800**
	Ave low	$14,800	—	—	—	$10,500	—	—	$7000
	Ave high	$22,200	—	—	—	$10,500	—	—	$9000

		Chemicals, allied products	Primary metal industry	Rubber, plastics products	Stone, clay, glass products	Instruments, related products	Fabricated metal products	Machinery, except electrical	Transportation equipment	Electric, electronic equipment	Communications, electric service	Miscellaneous
VP purchasing	**Ave low**	—	—	—	—	—	**$32,000**	—	—	—	—	—
	Ave high	—	—	—	—	—	**$45,000**	—	—	—	—	—
	Ave low	—	—	—	—	—	—	$42,000	—	—	—	—
	Ave high	—	—	—	—	—	—	$42,000	—	—	—	—
VP materials	**Ave low**	—	**$65,000**	—	—	—	**$65,000**	—	—	—	—	—
	Ave high	—	**$73,000**	—	—	—	**$73,000**	—	—	—	—	—
	Ave low	—	—	—	—	—	—	—	—	—	—	—
	Ave high	—	—	—	—	—	—	—	—	—	—	—
Purchasing director	**Ave low**	**$40,762**	**$65,000**	**$42,500**	**$40,000**	—	**$36,062**	**$38,000**	—	**$47,573**	—	**$34,000**
	Ave high	**$61,140**	**$65,000**	**$60,000**	**$55,000**	—	**$48,750**	**$45,000**	—	**$68,477**	—	**$45,000**
	Ave low	$28,275	—	$25,000	$30,000	$20,000	—	—	—	[illegible]	$54,000	—
	Ave high	$35,750	—	$40,000	$38,000	$24,000	—	—	—	$24,000	$54,000	—
Materials director	**Ave low**	**$52,100**	—	**$29,000**	—	—	**$45,000**	**$150,000**	—	**$38,350**	—	—
	Ave high	**$78,100**	—	**$36,000**	—	—	**$70,000**	**$150,000**	—	**$58,150**	—	—
	Ave low	—	—	—	—	—	—	—	—	—	—	—
	Ave high	—	—	—	—	—	—	—	—	—	—	—
Purchasing manager	**Ave low**	**$27,367**	**$34,750**	**$36,513**	**$35,400**	**$42,000**	**$28,950**	**$36,980**	—	**$33,733**	—	**$32,800**
	Ave high	**$40,267**	**$48,650**	**$49,913**	**$50,400**	**$51,000**	**$39,067**	**$45,120**	—	**$47,050**	—	**$39,333**
	Ave low	$22,450	$18,000	$27,000	—	$14,000	$27,329	$24,900	$16,000	$25,500	$48,264	$28,000
	Ave high	$29,750	$20,000	$29,000	—	$16,000	$35,337	$27,400	$25,000	$32,250	$48,264	$38,000
Materials manager	**Ave low**	—	**$40,000**	**$40,000**	—	—	**$35,000**	**$35,000**	—	**$40,000**	—	—
	Ave high	—	**$50,000**	**$76,050**	—	—	**$60,000**	**$45,000**	—	**$60,000**	—	—
	Ave low	$30,000	$27,500	$20,000	—	$35,000	$30,500	$19,000	—	$29,167	—	$32,000
	Ave high	$38,000	$33,500	$25,000	—	$45,000	$38,000	$22,500	—	$39,767	—	$42,000
Purchasing agent	**Ave low**	**$22,700**	**$27,000**	**$26,725**	**$28,600**	**$29,000**	**$20,500**	**$21,500**	—	**$27,146**	—	**$20,750**
	Ave high	**$32,900**	**$35,533**	**$43,470**	**$37,900**	**$41,000**	**$36,900**	**$26,000**	—	**$41,025**	—	**$34,300**
	Ave low	$19,750	$19,000	$18,000	—	—	$19,266	$20,000	—	$22,457	—	$17,000
	Ave high	$24,800	$23,000	$22,000	—	—	$25,655	$32,000	—	$26,433	—	$21,000
Senior buyer	**Ave low**	**$23,759**	**$23,700**	**$24,536**	—	**$23,700**	**$21,297**	**$23,885**	—	**$22,956**	—	**$23,000**
	Ave high	**$34,700**	**$32,600**	**$37,738**	—	**$33,000**	**$30,287**	**$29,317**	—	**$33,886**	—	**$30,867**
	Ave low	$28,250	$20,000	$20,000	$25,000	$24,000	$23,773	$17,500	—	$19,450	$26,104	$23,500
	Ave high	$30,300	$26,000	$22,000	$30,000	$30,000	$26,528	$22,500	—	$23,850	$28,496	$29,250
Buyer	**Ave low**	**$18,667**	**$19,067**	**$22,576**	—	**$19,200**	**$17,556**	**$19,370**	—	**$19,121**	—	**$17,000**
	Ave high	**$27,736**	**$26,400**	**$33,413**	—	**$27,000**	**$23,560**	**$25,182**	—	**$26,929**	—	**$21,400**
	Ave low	$19,100	—	$15,000	—	$14,000	$16,189	$16,350	$12,000	$14,880	$23,504	$19,000
	Ave high	$24,367	—	$20,000	—	$24,000	$19,863	$20,700	$13,500	$26,536	$24,500	$28,000
Junior buyer	**Ave low**	**$18,517**	—	**$16,600**	—	**$15,000**	**$14,084**	**$17,500**	—	**$16,084**	—	**$11,000**
	Ave high	**$24,257**	—	**$22,025**	—	**$20,000**	**$19,366**	**$21,417**	—	**$21,754**	—	**$11,000**
	Ave low	$12,950	—	$13,000	—	$10,000	$13,871	$12,500	$11,500	$14,550	$17,472	$17,250
	Ave high	$17,025	—	$16,000	—	$12,000	$18,701	[illegible]	$15,000	$17,450	$17,472	$20,200
Expeditor	**Ave low**	**$12,948**	**$15,000**	**$15,150**	**$20,000**	—	**$11,250**	**$18,000**	—	**$13,447**	—	**$14,600**
	Ave high	**$12,948**	**$20,000**	**$22,775**	**$28,000**	—	**$13,000**	**$22,000**	—	**$20,898**	—	**$16,250**
	Ave low	$17,600	—	—	$12,000	$10,000	$16,304	$8840	—	$12,309	$13,000	—
	Ave high	$20,250	—	—	$16,000	$14,000	$19,706	$10,920	—	$15,487	$14,976	—
Trainee	**Ave low**	**$11,500**	**$12,000**	—	—	—	**$9500**	—	—	**$8884**	—	**$14,000**
	Ave high	**$13,600**	**$14,000**	—	—	—	**$12,000**	—	—	**$12,984**	—	**$16,000**
	Ave low	$11,650	—	—	—	$8500	$8520	$9008	—	$9500	—	—
	Ave high	$14,850	—	—	—	$11,000	$9773	$10,088	—	$11,000	—	—

New projections for nonferrous supplies, demand, and prices

Count on being hit with some fair-sized nonferrous price increases—not only over the remainder of the current year but also into 1984 and 1985. Supplies won't be quite as easy as they've been either.

That's what Wharton Econometric Forecasting Associates are telling their clients these days—as the industry recovers from its worst recession in over 50 years, and as demand catches up with available supply in a fairly short period of time.

The new study—first in a continuing series of demand-supply-cost-price analyses being prepared for ***Purchasing World*** by Wharton—also makes these other, more-detailed projections:

- **Fourth quarter 1983 performance:** Look for continued buoyancy as capital goods buying finally begins to show some signs of life. This will give a further boost to both demand and prices--and tighten supply a bit.

Wharton, for example, forecasts a 15.9% gain in total nonferrous shipments over the last three months of the year (at seasonally adjusted annual rate)—as new orders rise another 5.3%. This, in turn, will up the industry's utilization rate (as calculated by a special Wharton formula) to 96.4%—significantly above the 75.3% rate recorded at the end of 1982.

- **1984 demand outlook:** Bolstered by continued capital equipment recovery and still substantial buying of big-ticket consumer items, overall nonferrous metal shipments could be up some 12% next year—enough to bring the industry back up to pre-recession levels of activity.
- **1984-and-beyond price trends.** More hikes are inevitable—but they'll tend to be somewhat smaller than the big catch-up increases recorded this year. Best bet: about a 7.9% overall boost in the official government producer price index for 1984—with an even larger 8.2% advance projected for the following year as capacity utilization rates move into the upper-90s range.

These and other projections that might impact on metal purchasing

A new forecasting approach

This month marks the introduction of another ***Purchasing World*** "first": Periodic industry-by-industry forecasts detailing all the pertinent demand, supply, cost, and price factors that are needed to formulate a viable purchasing strategy.

These projections are based on the recently introduced Wharton Industry Planning Service—an approach which dissects and analyzes the impact of such key variables as shipments, new orders, unfilled orders, inventories at the various stages of fabrication, costs, and operating rates.

Only by studying the interaction of such variables is it possible to come up with pertinent and meaningful price and availability projections.

It marks a radical departure, for example, in price forecasting where, until recently, operating rates (a proxy for supply-demand balance or imbalance) were the primary determinants utilized to arrive at a given price level.

As a Wharton spokesman explains it, "Capacity utilization alone cannot reflect supply-demand imbalances. Two other variables—unfilled orders and finished goods inventories—directly affect price behavior in many industries. It is difficult to predict prices, particularly volatile prices, without all three of these variables."

He adds that the latter two factors can be characterized as disequilibrium variables; that is, they reflect the degree to which supply (measured by production) and demand (measured by new orders) are in balance. Yet, they are neglected in most detailed industry price equations. Indeed, they appear only in some of the more aggregative price equations.

Nor does Wharton ignore cost factors. Input costs (wages, etc.) are also used as a price-determining variable.

Wharton now has numbers for 110 separate industries which allow for this new kind of sophisticated forecasting. The results for one crucial industry (nonferrous metals) are presented in the accompanying story—with other industries scheduled for similar ***Purchasing World*** treatment in the months ahead.

Nonferrous metals into 1985

	1983	1984				1985		
	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
Production (SAAR)	17.0	11.7	8.2	6.6	3.6	2.8	2.8	2.8
Shipments (SAAR)	15.9	11.9	8.0	7.0	3.3	3.7	2.3	2.8
New orders (SAAR)	5.3	5.7	4.1	4.1	2.0	0.4	1.6	0.4
Unfilled orders (SAAR)	12.6	14.8	21.6	8.7	9.1	7.0	5.7	5.7
Finished invent. (SAAR)	27.7	21.3	26.1	16.9	22.2	5.3	15.0	15.5
Capacity utilization (%)	96.4	98.1	99.2	99.8	99.3	98.5	97.4	96.5
Input costs (SAAR)	6.8	6.9	6.7	7.2	7.0	8.6	8.4	8.5
Prices, PPI (SAAR)	12.1	6.7	6.4	6.7	8.1	9.5	8.9	7.8

SAAR = Seasonally Adjusted Annual Rate
PPI = Producer Price Index
Source: Wharton Econometric Forecasting

2150 Qwip	$3375	x	x	x	x		T	8½ x 11	std	2m	I/II	1980														
2000 Qwip	$2375	x	x	x	x		T	8½ x 11	opt	2m	I/II	1980														
1300 Qwip	$1495	x	x	x	x		T	8½ x 11	na	2m	II	1978														
1200 Qwip	$1495	x	x	x	x		T	8½ x 11	na	2m	I	1975														
Kentek Information Systems, Inc. (Circle number 203)																										
K-Fax 800	$5195			x		x	T	8½ x any	std	20s	II/III	1983	$4	1982	Office automation products	x		x		30	3	yes	x	x	x	300
K-Fax 900	$5395			x		x	T	8½ x any	std	20s	I/II/III	1983														
Panafax Corporation (Circle number 204)																										
Panafax MV-1200	[1]			x	x		T	8½ x 25	opt	2m	II	1978			Facsimile equipment				[1]	50	[1]	[1]			[1]	[1]
Panafax MV-3000	[1]			x		x	T	11½ x 49½	std	20s	II/III	1982														
Panafax PX-100	[1]			x		x	T	10 x 39½	std	40s	II/III	1983														
Sanyo Business Systems Corp. (Circle number 205)																										
SF 355	$3000			x	x		T	8½ x any	std	3m	I/II	1981	$100	1979	Electronic office machines	x		x			3	yes	x	x		>150
SF 825	$4000			x		x	T	10 x any	std	20s	I/II/III	1982														
SF 935	$5400			x		x	T	10 x any	std	20s	I/II/III	1983														
Telautograph Corporation (Circle number 206)																										
OMNIFAX G21	$2900			x	x		T	8½ x any	std	1m	I/II	1979	$35	1888	Facsimile, communications equipment	x				50	12	yes	x	x		240
OMNIFAX G32	$3500			x		x	T	8¾ x any	std	40s	II/III	1981														
OMNIFAX G39	$4495			x		x	T	11 x any	std	22s	I/II/III	1983														
OMNIFAX G96	$6300			x		x	C	11¾ x any	std	15s	I/II/III	1982														
OMNIFAX G99	$5000			x		x	T	11¾ x any	std	15s	I/II/III	1983														
3M/Business Communication Products Div. (Circle number 207)																										
9136	$4395			x		x	T	8½ x 11	std		I/II/III	1980		1902	Business communications equipment	x	x			30	3	yes	x			30
9160	$7995			x	x	x	T	10 x 18	[2]		II/III	1981														
Express 9600	$3500			x		x	C	8½ x 14	[2]		III	1977														
EMT 1000B	$3200			x	x		T	—	[2]		II	1980														
EMT 2000	$7000			x		x	C	8½ x any	[2]	25s	II/III	1979														
EMT 2700	$6900			x		x	T	10½ x any	[2]	20s	II/III	1981														
EMT 9140	$3295			x		x	T	8½ x 14	[2]	85s	II/III	1981														
Xerox Corp. (Circle number 208)																										
TC400	$1695			x	x		T	8½ x 11	na	4m	I		$9000	1957	Office equipment	x					3	yes	x			200
TC455	$2495			x	x		T	8½ x 11	std	2m	I/II															
TC485	$4995			x	x		C	8½ x any	std	2m	I/II															
TC495-1	$10,395			x		x	C	8½ x any	std	20s	I/II/III															

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[1] Contact vendor [2] Roll

Alden Electronics
Washington Street
Westborough MA 01581
617-366-8851

Canon U.S.A., Inc.
1590 Touhy Avenue
Elk Grove IL 60007
312-228-5700

Exxon Office Systems Company
777 Long Ridge Road
Stamford CT 06902
203-329-5000

Kentek Information Systems, Inc.
6 Pearl Court, Box 78
Allendale NJ 07401
201-825-8500

Panafax Corporation
185 Froelich Farm Blvd.
Woodbury NY 11797
516-364-1400

Sanyo Business Systems Corp.
51 Joseph Street
Moonachie NJ 07074
201-440-9300

Telautograph Corporation
8700 Bellanca Avenue
Los Angeles CA 90045
213-641-3690

3M Business Communications Products Div.
3M Center
P. O. Box 33600
St. Paul MN 55133
612-733-9591

Xerox Corporation
1341 W. Mockingbird Lane
Dallas TX 75427
214-689-6000

strategy are spelled out in the accompanying table.

Market pressures can also be expected to vary on a metal-by-metal basis. Here's how analysts at the big, Philadelphia-based business consulting firm see individual metal performances shaping up over the next two years:

■ **Aluminum:** The outlook is for continued industry shipping gains and price increases through the end of the year and in 1984. Indications are that the demand upturn has turned into a solid recovery—with containers, packaging, building and construction, and transportation all contributing to the upturn.

As such, total aluminum shipments should increase 12% this year. But that would still leave totals below 1980's level—though continued production hikes are expected to raise the industry's capacity utilization rate to the low 80s in the first half of next year.

The producer price index (PPI) for primary aluminum ingot, meantime, is forecast to rise 35% in the fourth quarter from the average of the July-August period (see chart). This price increase leads to an annual rise of 2.2% above 1982's depressed levels.

And next year aluminum prices will follow the trend of continued recovery—posting quarterly, annualized gains of 13.9%, 8.2%, 7.0%, and 9.5%. This translates to an annual increase of 10.6% above 1983's estimated levels.

■ **Copper:** China reportedly controls a good portion of European aboveground stocks. Thus, further action by the Chinese—namely whether they will take delivery of any of this copper or simply sell it for a profit at a later date—will effect world copper prices concomitantly with changes on the London Metal Exchange (LME).

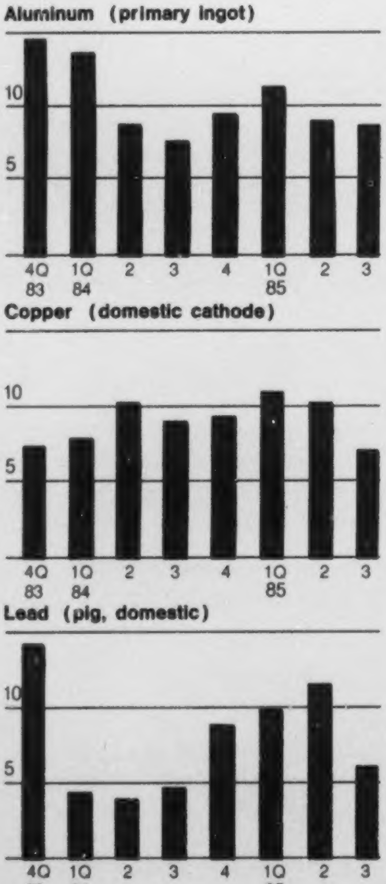
Furthermore, unsettled labor situations in Chile, Zambia, and Peru could jolt prices upward late in the year. The short walkout in Chile in June had no discernible affect on international prices because of the huge inventories on the LME and Comex and continued limp demand. However, extended disruption in any of these countries, especially as demand picks up with the industrial recovery, would drive prices up.

In any event, copper consumption will increase an estimated 6.6% over 1982's level on the strength of upturns in the auto and housing industries and, late in the year, consumer durables. Domestic shipments of refined copper (as distinct from consumption) will advance approximately 4% in 1983 over 1982's level.

Wharton also forecasts that copper prices will advance at a 7.1% seasonally adjusted annual rate during the fourth quarter—enough to push 1983 averages some 12.1% above 1982. And in 1984, the expanding industrial recovery will make for another 9.0% average increase.

■ **Lead:** Unlike those of most other nonferrous metals, lead markets remain quite shaky. And more of the same is projected. This is reinforced by the fact that lead production has been maintained at inflated levels because of the relative health of the market for its coproduct, zinc, and its frequent byproduct, silver. Add to this the overcapacity in the secondary lead industry, and the result is the lowest lead prices since 1976.

Nonferrous metal price trends
(% change from previous quarter at annual rate)



Aluminum (primary ingot)

Copper (domestic cathode)

Lead (pig, domestic)

Source: Wharton Econometric Forecasting Associates

The only sign that prices could stage some gains in the near future are reports that lead consumer inventories are low, and as a result, some replenishment purchases are beginning to be made. In any event, look for a slight increase in lead quotes during the upcoming fourth quarter. But, because of earlier declines, 1983 as a whole could be off 17.8%—the fourth consecutive year of primary lead price decline.

Next year, however, the combination of improved demand and an expected contraction in the size of the secondary lead industry (as a result of its current troubles) will lead to moderate increases in lead prices. On the other hand, continued shrinkage of the tetraethyl lead market will temper demand gains from increased auto production and replacement and industrial battery sales.

Upshot: Count on only a small 5.6% annual rise in the pig lead PPI—close to the level of general inflation for the year.

■ **Zinc:** Data from the American Bureau of Metal Statistics bear out the reports of limited, or even a bit tight, zinc supplies. Zinc inventories declined 13.6% in the first half of the year, falling from 29,240 tons in January to 25,270 tons in June.

The largest use for zinc (representing almost 50% of its consumption) is in galvanizing steel to protect it from corrosion. The second-largest zinc market—die castings primarily for use in autos—takes 30% of the industry's shipments. As a result, zinc demand will improve coincidentally with the strengthening of the construction industry (a major user of galvanized steel) and increased production of new cars.

The relatively short supplies in the industry also hold the potential for a runup in prices if zinc consumption picks up rapidly. Also, purchasing managers can expect longer leadtimes as demand picks up and inventories continue to fall. ***PW***